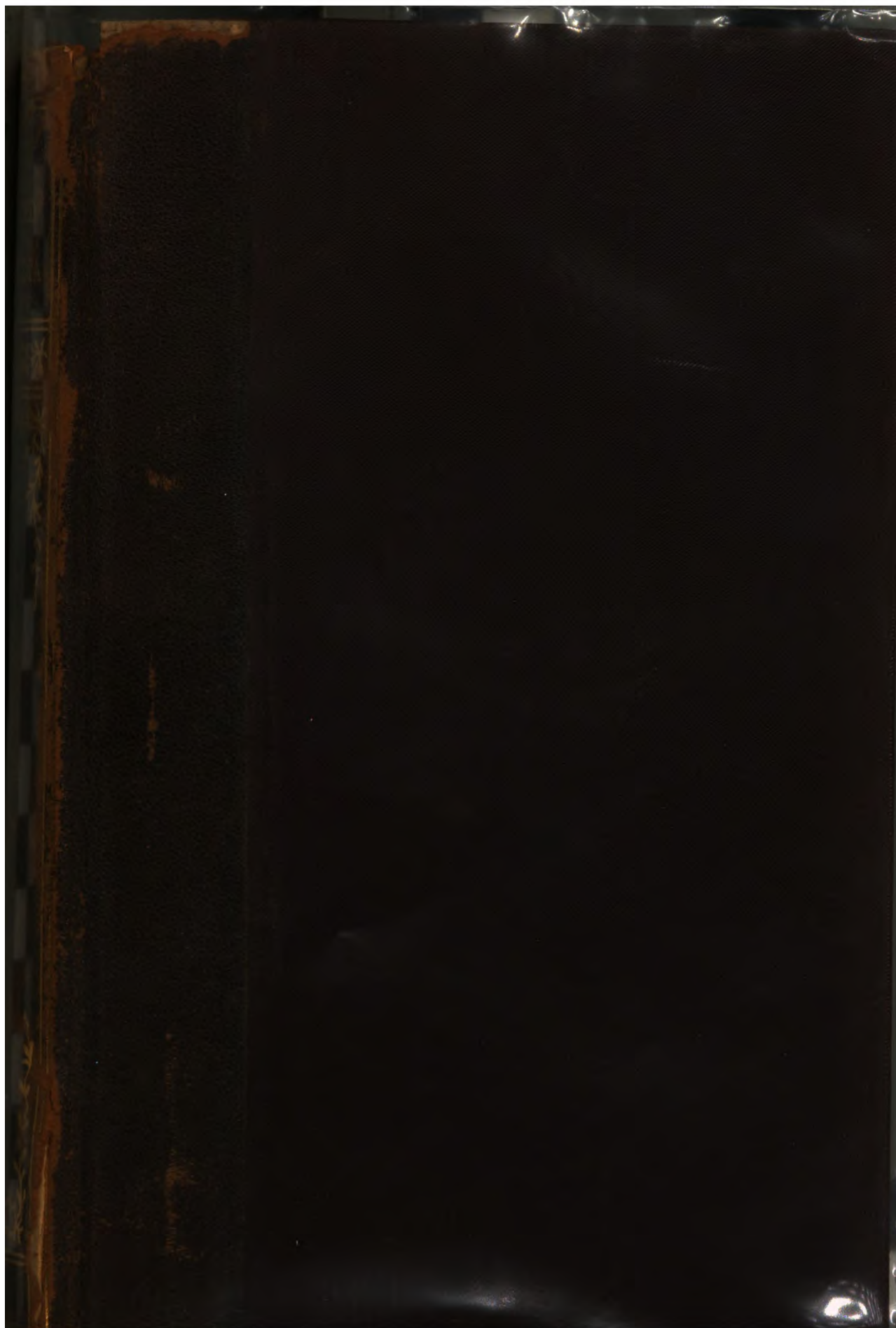
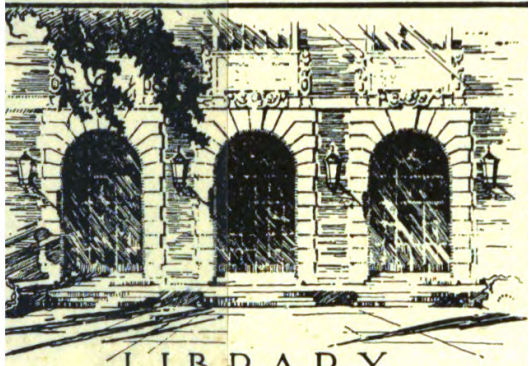
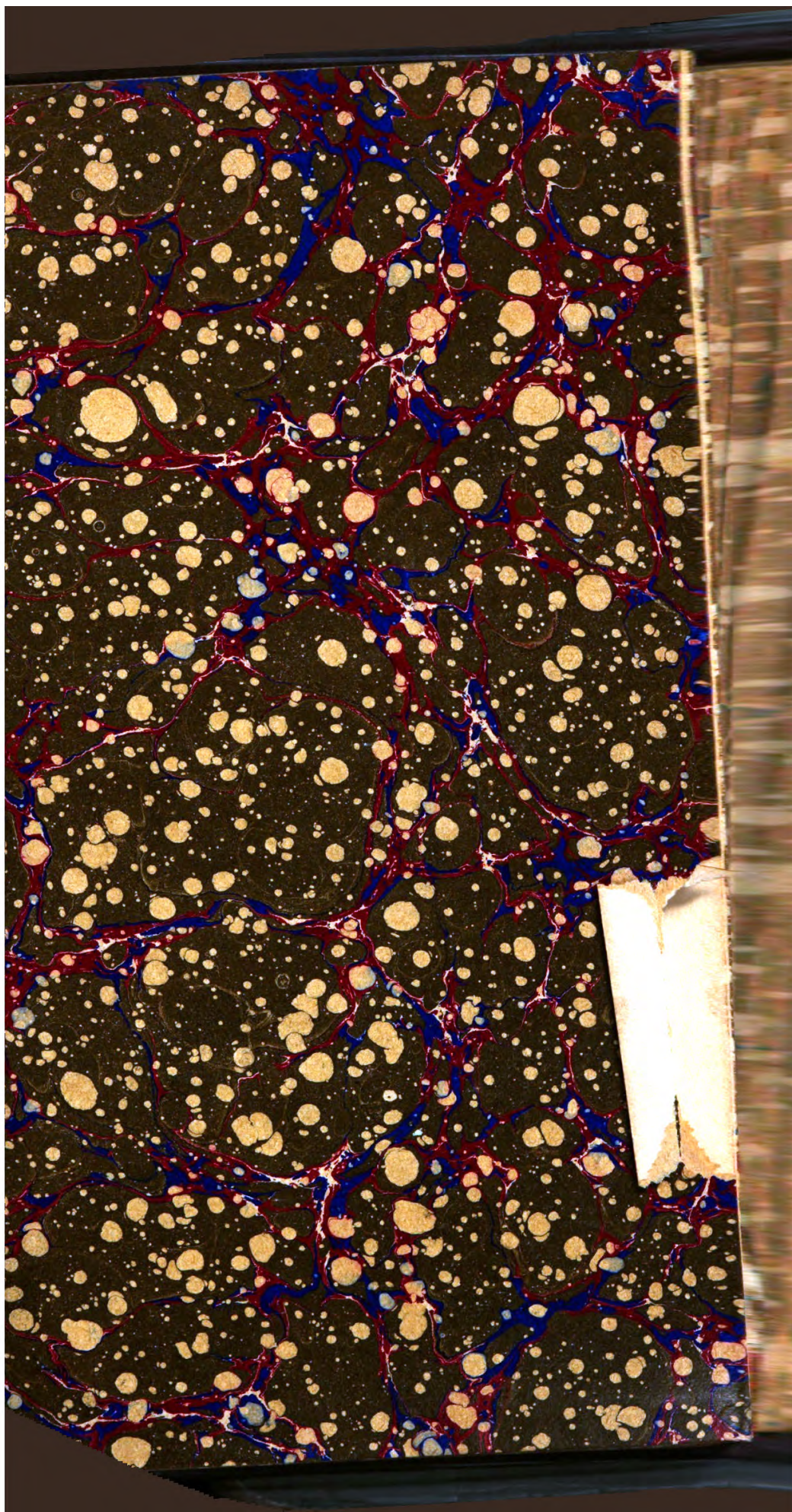






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ALDEN'S

MANIFOLD CYCLOPEDIA

OF

KNOWLEDGE AND LANGUAGE.

WITH ILLUSTRATIONS.

VOL. 21.

JORDAN—LEGACY.

NEW YORK:

JOHN B. ALDEN, PUBLISHER.

1890.

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031
A22
v.21

SCHEME OF SOUND SYMBOLS

FOR THE PRONUNCIATION OF WORDS.

Note.—(·) is the mark dividing words respelt phonetically into syllables; (ˈ), the accent indicating on which syllable or syllables the accent or stress of the voice is to be placed.

Sound-symbols employed in Respelling.	Representing the Sounds as exemplified in the Words.	Words respelt with Sound-symbols and Marks for Pronunciation.
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ā . . .	mate, fate, fail, aye	māt, fāt, fāl, ā.
ă . . .	mat, fat	măt, făt.
â . . .	far, calm, father	fâr, kām, fâ thér.
ä . . .	care, fair	câr, fâr.
aw . .	fall, laud, law	fawl, lawd, law.
ē . . .	mete, meat, feet, free	mēt, mêt, fêt, frē.
ě . . .	met, bed	mět, bėd.
é . . .	her, stir, heard, cur	hēr, stēr, hėrd, kēr.
ī . . .	pine, ply, height	pīn, plī, hīt.
ï . . .	pin, nymph, ability	pīn, nīm̃f, ä-bīl'ï-tī.
ō . . .	note, toll, soul	nōt, tōl, sōl.
ö . . .	not, plot	nōt, plōt.
ô . . .	move, smooth	mōv, smōth.
ö . . .	Goethe (similar to e in her) . . .	gō'teh.
ow . .	noun, bough, cow	noun, bow, kow.
oy . .	boy, boil	boy, boyl.
ü . . .	pure, dew, few	pür, dü, fū.
ű . . .	bud, come, tough	bűd, kűm, tűf.
ú . . .	full, push, good	fúl, púsh, gúd.
ű . . .	French plume, Scotch guid . . .	plűm, gűd.

ch . . .	chair, match	chār, mäch.
ch . . .	German buch, Heidelberg,	
	Scotch loch (guttural)	bóch, hī dēl-bėrch, lōch.
g . . .	game, go, gun	gām, gō, gűn.
j . . .	judge, gem, gin	jűj, jēm, jűn.
k . . .	king, cat, cot, cut	kűng, kăt, kōt, kűt.
s . . .	sit, scene, cell, city, cypress . .	sīt, sēn, sēl, sīt'ī, sī'prēs.
sh . .	shun, ambition	shűn, äm-bīsh'űn.
th . .	thing, breath	thűng, brėth.
th . .	though, breathe	thō, brėth.
z . . .	zeal, maze, muse	zēl, māz, műz.
zh . .	azure, vision	äzh'er, vīzh'űn.

ABBREVIATIONS USED IN THIS WORK.

a., or adj.....adjective.	B Britannic.
A. B.....Bachelor of Arts.	b.....born.
abbr.....abbreviation, abbreviated.	Ba.....Barium.
abl.....ablative.	Bart Baronet.
Abp.....Archbishop.	Bav Bavarian dialect.
abt.....about.	bl., bbl.....barrel, barrels.
Acad Academy.	B. C.....before Christ.
acc.....accusative.	B. C. L... Bachelor of Civil Law.
act.....active.	B. D.....Bachelor of Divinity.
A. D.....in the year of our Lord.	bef.....before.
ad. or adv..adverb.	Belg.....Belgic.
aft.....after.	Bi. Bismuth.
Adjt.....Adjutant.	biog.....biography, biographical.
Adm.....Admiral.	biol.....biology.
Ag.....Silver (Argentum).	B. L.....Bachelor of Laws.
agri.....agriculture.	Bohem. Bohemian.
Al.....Aluminium.	bot.....botany, botanical.
Ala.....Alabama.	Bp.....Bishop.
alg.....algebra.	Br.....Bromine.
A. M.....before noon.	Braz.....Brazilian.
A. M.....Master of Arts.	Brig Brigadier.
Am.....Amos.	Brit.....British, Britannica.
Amer.....America, American.	bro.....brother.
anat.....anatomy, anatomical.	Bulg.....Bulgarian.
anc.....ancient, anciently.	bush.....bushel, bushels.
An. M.....in the year of the world.	C.....Carbon.
anon.....anonymous.	c.....century.
antiq.....antiquity, antiquities.	c.....city.
aor.....aorist, aoristic.	Ca.....Calcium.
Apr April.	Cal. California.
Ar.....Arabic.	Camb.....Cambridge.
arch architecture.	Can.....Canada.
archæol... archæology.	Cant.....Canterbury.
arith.....arithmetic.	cap.....capital.
Ark.....Arkansas.	Capt. Captain.
art.....article.	Card. Cardinal.
artil.....artillery.	carp.....carpentry.
AS. or A. Sax. Anglo-Saxon.	Catal.....Catalonian.
As Arsenic.	Cath. Catholic.
Assoc.....Association.	caus.....causative.
asst.....assistant.	cav. cavalry.
astrol.....astrology.	Cd.....Cadmium.
astrou.....astronomy.	Ce.....Cerium.
attor.....attorney.	Celt. Celtic.
at. wt.....atomic weight.	Chal.....Chaldee.
Au Gold (Aurum).	chem.....chemistry, chemical.
A. U. C.....in the year from the building of Rome.	chh.....church.
Aug August.	Chin.....Chinese.
aug.....augmentative.	Chron.....Chronicles.
Aust.....Austrian.	chron.....chronology.
A. V.....authorized version (of Bible), 1611.	Cl. Chlorine.
avoird.....avoirdu pois.	Class.....Classical (= Greek and Latin).
B.....Boron.	Co.....Cobalt.
	Co.....Company.
	co.....county.
	cog.....cognate, cognate with.

ABBREVIATIONS.

Col.....	Colonel.	e.g.....	for example.
Col.....	Colossians.	Egypt.....	Egyptian.
Coll.....	College.	elect.....	electricity.
colloq.....	colloquial.	Emp.....	Emperor.
Colo.....	Colorado.	Encyc.....	Encyclopædia.
Com.....	Commodore.	engin.....	engineering.
com.....	commerce.	engr.....	engraving.
comp.....	compare.	entom.....	entomology.
compar.....	comparative.	env. ext.....	envoy extraordi-
conch.....	conchology.		nary.
cong.....	congress.	ep.....	epistle.
Congl.....	Congregational.	Eph.....	Ephesians.
conj.....	conjunction.	Epis.....	Episcopal.
Conn.....	Connecticut.	eq.....	equal, equals.
contr.....	contraction, con-	equiv.....	equivalent.
	tracted.	Est.....	Esther.
Cop.....	Coptic.	estab.....	established.
Cor.....	Corinthians.	etc.....	and others like.
corr.....	corresponding.	Eth.....	Ethiopic.
Corn.....	Cornish.	ethn.....	ethnography, eth-
Cr.....	Chromium.		nology.
crystal.....	crystallography.	et seq.....	and the following.
Cs.....	Cæsium.	etym.....	etymology.
ct.....	cent.	Eur.....	European.
Cu.....	Copper (Cuprum).	Ex.....	Exodus.
cwt.....	a hundred weight.	exclam.....	exclamation.
Cyc.....	Cyclopædia.	Ezek.....	Ezekiel.
Cym.....	Cymric.	Ezr.....	Ezra.
D.....	Didymium.	F.....	Fluorine.
D. or Dut.....	Dutch.	f.....	father.
d.....	died.	Fahr.....	Fahrenheit.
d. (l. s. d.).....	penny, pence.	Fe.....	Iron (Ferrum).
Dak.....	Dakota.	Feb.....	February.
Dan.....	Daniel.	fem.....	feminine.
Dan.....	Danish.	fig.....	figure, figuratively.
dat.....	dative.	Finn.....	Finnish.
dau.....	daughter.	Fl.....	Flemish.
D. C.....	District of Columbia	Fla.....	Florida.
D. C. L.....	Doctor of Civil (or	for.....	foreign.
	Common) Law.	fort.....	fortification.
D. D.....	Doctor of Divinity.	Fr.....	French.
Dec.....	December.	fr.....	from.
dec.....	declension.	freq.....	frequentative.
def.....	definite, definition.	Fris.....	Frisian.
deg.....	degree, degrees.	ft.....	foot, feet.
Del.....	Delaware.	fut.....	future.
Del.....	Delegate, Delegates	G.....	Glucinium.
Dem.....	Democratic.	Ga.....	Gallium.
Dep.....	Deputy, Deputies.	Gael.....	Gaelic.
dep.....	deponent.	Gal.....	Galatians.
dept.....	department.	gal.....	gallon.
deriv.....	derivation, deriva-	galv.....	galvanism, galvanic.
	tive.	Gen.....	General.
Deut.....	Deuteronomy.	Gen.....	Genesis.
dial.....	dialect, dialectic.	gen. or	
diam.....	diameter.	genit.....	genitive.
Dic.....	Dictionary.	Geo.....	Georgia.
dim.....	diminutive.	geog.....	geography.
dist.....	district.	geol.....	geology.
distrib.....	distributive.	geom.....	geometry.
div.....	division.	Ger.....	German.
doz.....	dozen.	Goth.....	Gothic.
Dr.....	Doctor.	Gov.....	Governor.
dr.....	dram, drams.	govt.....	government.
dram.....	drama, dramatic.	Gr.....	Grand.
dwt.....	pennyweight.	Gr.....	Greek.
dyn.....	dynamics.	gr.....	grain, grains.
E.....	Erbium.	gram.....	grammar.
e.....	east, eastern.	H.....	Hydrogen.
Eng.....	English.	h.....	hour, hours.
Ecc.....	Ecclesiastes.	Hab.....	Habakkuk.
eccles.....	ecclesiastical.	Hag.....	Haggai.
ed.....	edited, edition, edi-	H. B. M.....	His (or Her) Britan-
	tor.		nic Majesty.

ABBREVIATIONS.

Heb	Hebrew, Hebrews.	L. G.	Low German.
her	heraldry.	Lieut.	Lieutenant.
Hg	Mercury, Hydrar- gyrum.	Linn	Linnaeus, Linnaen.
hhd	hogshead, hogs- heads.	lit	literal, literally.
Hind	Hindostanee, Hin- du, or Hindi.	Lith	Lithuanian.
hist	history, historical.	L. L.	Late Latin, Low Latin.
Hon	Honorable.	LL.D.	Doctor of Laws.
hort	horticulture.	lon	longitude.
Hos	Hosea.	M	Monsieur.
Hung	Hungarian.	m	mile, miles.
hydros	hydrostatics.	M. A.	Master of Arts.
I	Iodine.	Macc	Maccabees.
I., Is	Island, Islands.	mach	machinery.
i., or intrans.	intransitive.	Mag	Magazine.
Icel	Icelandic.	Maj	Major.
ich	ichthyology.	Mal	Malachi.
Ida	Idaho.	manuf	manufactures.
i.e.	that is.	Mar	March.
Ill	Illinois.	masc	masculine.
illus	illustration.	Mass	Massachusetts.
Imp	Imperial.	math	mathematics, math- ematical.
imper	imperative.	Matt	Matthew.
imperf	imperfect.	M. D.	Doctor of Medicine.
impers	impersonal.	Md	Maryland.
In	Indium.	Me	Maine.
in	inch, inches.	mech	mechanics, me- chanical.
incept	inceptive.	med	medicine, medical.
Ind	Indiana.	Med. L.	Medieval Latin.
ind	indicative.	mem	member.
indef	indefinite.	mensur	mensuration.
Indo-Eur.	Indo-European.	Messrs. or	
inf	infantry.	MM.	Gentlemen, Sirs.
inf	infinitive.	metal	metallurgy.
int	interest.	metaph	metaphysics, meta- physical.
intens	intensive.	meteor	meteorology.
interj	interjection.	Meth	Methodist.
introd	introduction.	Mex	Mexican.
Io	Iowa.	Mg	Magnesium.
Ir	Iridium.	M. H. G.	Middle High Ger- man.
Ir	Irish.	Mic	Micah.
Iran	Iranian.	Mich	Michigan.
irr	irregular.	mid	middle (voice).
Is	Isaiah.	milit	military.
It	Italian.	min	minute, minutes.
Jan	January.	mineral	mineralogy.
Jas	James.	Minn	Minnesota.
Jer	Jeremiah.	Min. Plen.	Minister Plenipoten- tiary.
Jn	John.	Miss	Mississippi.
Josh	Joshua.	Mlle	Mademoiselle.
Jr	Junior.	Mme	Madam.
Judg	Judges.	Mn	Manganese.
Jul	July.	Mo	Missouri.
K	Potassium (Kalium)	Mo	Molybdenum.
K	Kings (in Bible).	mod	modern.
k	king.	Mont	Montana.
Kan	Kansas.	Mr	Master (Mister).
Kt	Knight.	Mrs	Mistress (Missis).
Ky	Kentucky.	MS., MSS.	Manuscript, Manu- scripts.
L	Latin.	Mt	Mount, mountain.
L	Lithium.	mus	music.
l. (l. s. d.)	pound, pounds (sterling).	Mus. Doc.	Doctor of Music.
La	Lanthanum.	myth	mythology, mytho- logical.
La	Louisiana.	N	Nitrogen.
Lam	Lamentations.	N	Norse, Norwegian.
lang	language.	n	north, northern, northward.
lat	latitude.		
lb., lib.	pound, pounds (weight).		
Lett	Lettish.		
Lev	Leviticus.		

ABBREVIATIONS.

n.....noun.
Na.....Sodium (Natrium).
Nah.....Nahum.
nat.....natural.
naut.....nautical.
navig.....navigation.
Nb.....Niobium.
N. Car.....North Carolina.
Neb.....Nebraska.
neg.....negative.
Neh.....Nehemiah.
neut.....neuter.
Nev.....Nevada.
N. Ham.....New Hampshire.
N. H. G.....New High German.
Ni.....Nickel.
N. Jer.....New Jersey.
N. Mex.....New Mexico.
N. T., or
N. Test.....New Testament.
N. Y.....New York.
nom.....nominative.
Norm.....Norman.
North. E.....Northern English.
Nov.....November.
Num.....Numbers.
numis.....numismatics.
O.....Ohio.
O.....Oxygen.
Obad.....Obadiah.
obj.....objective.
obs., or †.....obsolete.
obsoles.....obsolescent.
O. Bulg.....Old Bulgarian.
Oct.....October.
OE.....Old English.
OF, or O. Fr.....Old French.
O. H. G.....Old High German.
Ont.....Ontario.
O. Prus.....Old Prussian.
Or.....Oregon.
ord.....ordnance.
orig.....original.
ornith.....ornithology.
Os.....Osmium.
O. Sax.....Old Saxon.
O. T., or
O. Test.....Old Testament.
Oxf.....Oxford.
oz.....ounce, ounces.
P.....Phosphorus.
p., pp.....page, pages.
p., or part.....participle.
paleon.....paleontology.
parl.....parliament.
pass.....passive.
pathol.....pathology.
Pb.....Lead (Plumbum).
Pd.....Palladium.
pejor.....pejorative.
Penn.....Pennsylvania.
Per.....Persic or Persian.
perf.....perfect.
pers.....person.
persp.....perspective.
Peruv.....Peruvian.
Pet.....Peter.
Pg.....Portuguese.
phar.....pharmacy.
Ph.D.....Doctor of Philosophy.
Phil.....Philippians.
Philem., ..Philemon.

philol.....philology, philological.
philos.....philosophy, philosophical.
Phen.....Phœnician.
photog.....photography.
phren.....phrenology.
phys.....physical, physiology.
physiol.....physiology, physiological.
Pl.....Plate.
pl.....plural.
Pl. D.....Platt Deutsch.
plupf.....pluperfect.
P. M.....after noon.
pneum.....pneumatics.
P. O.....Post Office.
poet.....poetical.
Pol.....Polish.
pol. econ.....political economy.
pop.....population.
poss.....possessive.
pp.....pages.
pp.....past participle.
p. pr.....present participle.
Pr.....Provençal.
prep.....preposition.
Presb.....Presbyterian.
Pres.....President.
pres.....present.
pret.....preterite.
prim.....primitive.
priv.....privative.
prob.....probably.
Prof.....Professor.
pro.....pronoun.
pron.....pronunciation, pronounced.
pros.....prosody.
Prov.....Proverbs.
prov.....province, or provincial.
Ps.....Psalm, Psalms.
psychol.....psychology.
pt.....pint.
Pt.....Platinum.
pub.....published, publisher.
pwt.....pennyweight.
Q.....Quebec.
qt.....quart.
qtr.....quarter (28 lbs.).
qu.....query.
R.....Rhodium.
r., or riv.....river.
Rb.....Rubidium.
q.v.....which see.
Rom. Cath.....Roman Catholic.
rec. sec.....recording secretary.
Ref.....Reformed.
refl.....reflex.
reg.....regular.
rel. pro.....relative pronoun.
rep.....representation.
Rev.....Revelation.
Rev.....Reverend.
Rev. V.....Revised Version.
rhet.....rhetoric, rhetorical.
R. I.....Rhode Island.
Rom.....Roman, Romans.
r.r.....railroad.
Rt.....Right.
Ru.....Ruthenium.
Rus.....Russian.

ABBREVIATIONS.

r.w.....	railway.	teleg.....	telegraphy.
S.....	Sulphur.	Tenn.....	Tennessee.
s.....	second, seconds.	terr.....	territory.
s.....	shilling, shillings.	term.....	termination.
S. or s.....	south, southern, southward.	Teut.....	Teutonic.
Sam.....	Samuel.	Tex.....	Texas.
Sax.....	Saxon.	Th.....	Thorium.
Sb.....	Antimony (Stibi- um).	theol.....	theology, theolog- ical.
Sc.....	Scotch.	Thess.....	Thessalonians.
Scand.....	Scandinavian.	Ti.....	Titanium.
S. Car.....	South Carolina.	Tim.....	Timothy.
scr.....	scruple, scruples.	Tit.....	Titus.
Scrip.....	Scripture, Scriptu- ral.	Tl.....	Thallium.
sculp.....	sculpture.	toxicol.....	toxicology.
Se.....	Selenium.	trigon.....	trigonometry.
sec.....	secretary.	Turk.....	Turkish.
sec.....	section.	typog.....	typography, typo- graphical.
Sem.....	Semitic.	U.....	Uranium.
Sep.....	September.	Unit.....	Unitarian.
Serv.....	Servian.	Univ.....	Universalist.
Si.....	Silicon.	Univ.....	University.
sing.....	singular.	U. Presb.....	United Presbyteri- an.
sis.....	sister.	U. S.....	United States.
Skr.....	Sanskrit.	Ut.....	Utah.
Slav.....	Slavonic, Slavic.	V.....	Vanadium.
Sn.....	Tin (Stannum).	v.....	verb.
Soc.....	Society.	Va.....	Virginia.
Song Sol.....	Song of Solomon.	var.....	variety (of species).
Sp.....	Spanish.	Vt.....	Vermont.
sp. gr.....	specific gravity.	v. i.....	verb intransitive.
sq.....	square.	vill.....	village.
Sr.....	Senior.	viz.....	namely.
Sr.....	Strontium.	v. n.....	verb neuter.
St.....	Saint.	voc.....	vocative.
st.....	street.	vol.....	volume.
stat.....	statute.	vols.....	volunteers.
S. T. D.....	Doctor of Sacred Theology.	v. tr.....	verb transitive.
subj.....	subjunctive.	W.....	Tungsten (Wolf- ram).
suf.....	suffix.	W.....	Welsh.
superl.....	superlative.	w.....	west, western, westward.
Supp.....	Supplement.	Wash.....	Washington.
Supt.....	Superintendent.	Wis.....	Wisconsin.
surg.....	surgery, surgical.	wt.....	weight.
Surv.....	surveying.	W. Va.....	West Virginia.
Sw.....	Swedish.	Wyo.....	Wyoming.
sym.....	symbol.	Y.....	Yttrium.
syn.....	synonym.	yd.....	yard.
Syr.....	Syriac.	yr.....	year.
t.....	town.	Zech.....	Zechariah.
tr.....	transitive.	Zeph.....	Zephaniah.
Ta.....	Tantalum.	Zn.....	Zinc.
Tart.....	Tartar.	zool.....	zoology, zoological.
Te.....	Tellurium.	Zr.....	Zirconium.
technol.....	technology.		

ALDEN'S

MANIFOLD CYCLOPEDIA.

JORDAN, or **JORDEN**, n. *jör'dn* [OE. *jordanis*—from Sw. *jord*, earth: *jordan* meaning literally an 'earthen pot']: a pot or vessel used formerly by physicians and alchemists, something like a soda-water bottle, but with a wider neck; a chamber-pot. *Note*.—**JORDAN** is also said to have its origin from the river *Jordan* of Palestine, L. *Iördänēs*, Gr. *Iördänēs*, arising from the fact that pilgrims to the Holy Land were formerly in the habit of bringing bottles of water from the Jordan for baptismal purposes—see *Skeat*. **JORDAN ALMONDS**, n. name for sweet almonds.

JORDAN, *jawr'dan*: largest river in Palestine, meaning in Hebrew 'descender' or 'swift-flowing,' in Arabic 'the great watering place'; rising by three sources in the n. extremity of the Palestine, flowing nearly s., passing through Lake Merom (modern Huleh) and the Sea of Galilee or Lake of Tiberias, tortuously traversing about 200 m., leaping over 27 considerable rapids, and emptying into the Dead Sea after a total fall of about 3,000 ft. from Hasbeiya, and 2,450 feet from Banias. The total length from Banias to the Dead Sea is 104 m. direct; the average width 90 to 150 ft.; Lake Huleh is 7 ft. above sea level and the Sea of Galilee 682.5 ft. below; hence the greater part of the river has the singularity of being several hundred ft. below sea-level. Its sources are (1) the *Leddän* or Little Jordan of Josephus, which proceeds from the largest pool or fountain in Syria, at the base of the hill Tell-el-Kady, at the s. end of Mt. Hermon, about 650 ft. above sea-level; (2) the *Baniasy*, having its origin in the cave at Banias, the ancient Caesarea Philippi, 1,080 ft. above sea-level; (3) the *Nahr Hasbany*, rising at Hasbeiya on Mt. Hermon, 12 m. n. of Tell-el-Kady, which is the narrowest and longest of the three, and rises at the highest elevation, 1,700 ft. above sea-level. The *Leddän* and *Baniasy* unite after flowing about 5 m., and the *Nahr Hasbany* joins the stream in the marshy plain of Huleh. In the flow of 12 m. to Lake Huleh the river falls 1,000 ft., and from the lake (4 m. long) to the Sea of Galilee (12½ m. long) 10½ m., there is a further fall of 682 ft. The principal tributaries are the Hieromax and Jabbok on the e., and the Jalud and Faria on the w. The mouth of the J. is 540 ft. wide and 1,312 ft. below sea-level.

JORDAN—JORGENSEN.

JORDAN, DOROTHY or DORA: about 1762–1816 or 23; b. near Waterford, Ireland: actress. She made her first appearance on the stage in Dublin as Phebe in *As You Like It*, played an engagement of 3 years in the York Theatre, and under the name of Mrs. Jordan first appeared in London 1785, Oct. 18. Her portrayals of character in comedy and musical farce made her very popular, and her talents and beauty attracted the attention of the Duke of Clarence, afterward King William IV., who induced her to leave her protector and become his mistress. She had 10 children by him, who took the name of Fitz-Clarence. The Duke terminated this connection 1811, and Dora retired to France, where some authorities say she died in poverty 1816, July 3, while others claim that she returned to England and lived under an assumed name till 1823.

JORDANES, *jor-dā'nēs*, or JORNANDES, *jor-nān'dēz*: historian of the Gothic nation; about the middle of the 6th c.; by birth a Goth, or both of Alan and of Gothic descent. He was first a notary, but afterward became a monk, and is supposed by some to have been made Bishop of Croton, in Italy, but of this there is no certain evidence. He wrote two historical works in the Latin language; the first, *De Regnorum ac Temporum Successione*, is a short compendium of the most important events in history from the creation to A.D. 552; but the work is valuable only from its accounts of several barbarous northern nations. His other work, *De Getarum Origine et Rebus Gestis* (Concerning the Origin and Deeds of the Goths), has obtained great renown, chiefly as our only source of information about the Goths and other barbarian tribes, except when they are casually mentioned by some Greek or Latin historian. The work is, however, full of inaccuracies, both of time, place, and person; and it is evidently based upon, or copied from, the 12 lost books of the Roman senator Cassiodorus. There are many editions of both works.

JORGENSEN, *yor'gēn-son*, JORGEN: Danish adventurer: b. 1779, Copenhagen; son of a watchmaker. Having previously visited Iceland in a ship in which he held the position of interpreter, J. arrived at Reikiavik in the *Margaret and Ann*, an armed merchantman from London, carrying 10 or 12 guns, 1809, June 21. A few days later he, with armed followers, surrounded the house of the governor, took him prisoner, and informed the town's-people that he should hold Iceland in possession for England, 'until such time as the English fleet should relieve him.' He then issued several proclamations, and organized a 'government office,' confiscating all Danish property, with whatever else he could lay hands on, *to the state chest*, and subjecting the inhabitants to an unscrupulous despotism. On Aug. 9 his brief reign was ended by the arrival of a British man-of-war, the commander of which, hearing of the piratical invasion of J., immediately seized and imprisoned him, and restored the previous condition of affairs. J. was carried to England, but seems to have escaped the punishment that he merited. He lived in London for some years, was con-

JORIS—JOSEPH II.

victed of robbery 1820, and transported to Botany Bay 1825.

JORIS (or GEORGE), DAVID: see ANABAPTISTS.

JORULLO, *chō-rōl' yō*: volcanic mountain in Mexico, 150 m. w.s.w. of the city of Mexico; thrown up, 1759, Sep., to the height of 1,375 ft. from a plain, which itself was 2,890 ft. above the level of the sea; lat. 19° 10' n, long. 101° 2' w. This new elevation originally consisted of a series of cones of various sizes. Many of the subordinate eminences have since disappeared; some have changed their form; and few now emit vapor. The temperature of the surface has gradually declined, and much of the locality has been covered with forest trees.

JORUM, n. *jör' um* [Sw. *jord*, earth—properly meaning an earthen pot: a colloquial and slang word]: a large drinking-vessel; its contents; a full bowl.

JOSEFFY, *yo-sěf' i*, RAFAEL: pianist: b. Pressburg, Hungary, 1852. He manifested a genius for music while a child, and was carefully trained for a pianist. Acquiring a delicate touch and a sympathetic execution, he became a favorite with the musical public at his first appearance, and has since attained wide spread fame in Europe and America. By many he has been greeted as the worthiest successor of Liszt.

JOSEPH I., Emperor of Germany: 1678, July 26—1711, Apr. 17 (King of Hungary 1689, King of the Romans 1690, Holy Roman Emperor 1705–11); b. Vienna; eldest son of Leopold I. The influence of the Prince of Salm, who had the charge of his education, and his subsequent connection with Prince Eugene, led him to opinions much more liberal than those which have prevailed in his family, and he granted privileges to the Protestants of Hungary and Bohemia which had been refused by his predecessors. He also concluded a treaty 1707 with Charles XII. of Sweden, by which he granted religious liberty to the Protestants of Silesia, and restored to them 120 churches which had been taken from them by the Jesuits. He was fond of courtly ceremonial, but mild and affable, and sought to improve the condition of the peasantry in his dominions by relieving them from some of the oppressions to which they were subject. He eagerly and successfully prosecuted, in alliance with Britain, the war of the Spanish Succession against France.

JOSEPH II., Emperor of Germany: 1741, Mar. 13—1790, Feb. 20 (King of the Romans 1764, Holy Roman Emperor 1765–90); b. Vienna; son of Emperor Francis I. and Maria Theresa (q.v.). He was born at a time when his mother's fortunes were in their lowest depression. He early gave proof of excellent abilities. After the peace of Hubertsburg, he was elected king of Rome, and after the death of his father (1765, Aug. 18), emperor of Germany. Maria Theresa also associated him with herself in the government of the Austrian states; but for some time his actual share in it amounted to little more than the chief command

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of the army. On her death 1780, he inherited all her dignities and power. He was ambitious of increase of territory, and although he failed to add Bavaria to the Austrian dominions, which he thought to consolidate by obtaining Bavaria in exchange for the Low Countries, yet he was successful in acquiring Galicia, Lodomeria, and the county of Zips, at the first partition of Poland 1772; and he appropriated, 1780, great part of the bishoprics of Passau and Salzburg. He was a zealous reformer, having imbibed, like Frederick the Great, the principles of the philosophy which prevailed in that age, but he attempted his reforms too rashly, and too much by mere authority, and was compelled to restore many things to their former condition; the hostility of the nobles and clergy, whose power and privileges he sought to reduce, producing rebellions in various parts of his dominions. The clergy in particular regarded him with detestation. He had early shown a dislike to them, which caused no little vexation to his mother; and as soon as he received full possession of the government of Austria, he declared himself independent of the pope, and prohibited the publication of any new papal bulls in his dominions without his *Placet regium*. The continued publication of the bulls *Unigenitus* (q.v.) and *In cænâ Domini* (q.v.) also was prohibited. Besides this, he suppressed no fewer than 700 convents, reduced the number of the regular clergy from 63,000 to 27,000, prohibited papal dispensations as to marriage, and 1781, Oct. 15, published the celebrated *Edict of Toleration*, by which he allowed the free exercise of their religion to the Protestants and Not-united Greeks in his dominions. Pope Pius VI. thought to check this course by a personal interview with the emperor, and for that purpose, visited Vienna 1782; and though he was quite unsuccessful in his object, he carried away with him the conviction that the people were utterly unprepared for the reforms which their sovereign sought to accomplish, a conviction proved by the event. J. engaged in a war with Turkey 1788, in which he was unsuccessful; and the vexation caused by this, and by the revolts in his own dominions, and the necessity under which he felt himself of revoking many of the edicts by which he had sought to promote the welfare of his people, hastened his death. He founded many valuable institutions, and did much to promote arts, manufactures, and commerce in Austria.

JOSEPH, King of Naples: see BONAPARTE (JOSEPH).

JOSEPHINE, *jō-zé-fēn'*, F. *zhō-zā-fēn'*, MARIE ROSE, Empress of the French: 1763, June 23—1814, May 29; b. at Trois Islets, in the island of Martinique, where her father, Joseph Tascher de la Pagerie, was captain of the port at St. Pierre. She had only a meagre colonial education; but her qualities of mind and heart, even more than her beauty, won universal regard. When about 15 years of age, after matrimonial negotiations between her family and that of the Beauharnais, her father brought her to France; and 1779, Dec. 13, she married the Viscount Alexandre Beauharnais; of which marriage were born Eugene, Viceroy of Italy, and

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Hortense, Queen of Holland, who was mother of Emperor Napoleon III. J.'s husband conceived a jealousy of her, and sought a legal separation, which he failed to obtain. J. went back to her parents, but after two years returned to her husband at his request (1790) when the Revolution had broken out. During the Reign of Terror he suffered death, and J. barely escaped through the events of 9th Thermidor (1794, July 27). Afterward she was reduced to great straits. Having occasion to visit Napoleon Bonaparte to thank him for restoring to her the sword of her husband, she greatly impressed him with her beauty and sweetness of manner; and the result was their marriage 1796, Mar. 9. She accompanied him in some of his campaigns, and exercised a great influence in restraining him from measures of violence and severity. At Malmaison, and afterward at the Luxembourg and the Tuileries, she attracted round her the most brilliant society of France, and contributed not a little to the increase of her husband's power. She regarded his exaltation to the throne, however, with a presentiment of evil; and from the day of her becoming empress, seemed to dread that political motives might lead him to seek the dissolution of a marriage which had not been blessed with children. After scenes of the most painful kind, this took place: the marriage was dissolved by law 1809, Dec. 16. J. retained the title of empress, corresponded with Bonaparte, and if the allied sovereigns had permitted, would have rejoined him after his fall. She lived near Evreux. See Aubenas, *Histoire de J.* (1859); and the *Mémoires de Madame de Réimusat* (3 vols. Paris 1879-80; Eng. trans. 1880).

JOSEPHUS, *jō-sē'fūs*, FLAVIUS: celebrated historian of the Jews: b. Jerusalem, between A.D. 37, Sep. 13, and 38, Mar. 16; d. some time after A.D. 100. He was of both royal and sacerdotal lineage; descended, on the mother's side, from the line of Asmonean princes, while his father, Matthias, officiated as a priest in the first of the 24 courses. The careful education that he received developed his brilliant faculties at an unusually early period, and his acquirements in Hebrew and Greek literature—his two principal studies—soon drew public attention. Having successively attended the lectures at the paramount religious schools of his time—'sects,' as he inaccurately terms them—he withdrew into the desert, to a man whom he calls Banos, conjectured to have been either a follower of John the Baptist or an Essene. Three years later, at the age of 19, he returned to Jerusalem, and thereafter belonged to the body of the 'Pharisees,' which comprised the bulk of the people. So great was the regard for his abilities, that at the age of only 26 years he was chosen delegate to Nero. When the Jews rose in their last and fatal insurrection against the Romans, J. was appointed gov. of Galilee. Here he showed great valor and prudence; but the advance of the Roman general Vespasian (A.D. 67) made resistance hopeless. The city of Jotapata, into which J. had thrown himself, was taken after a desperate resistance of 47 days. With some others he concealed himself in a cavern, but his hiding-place was discovered, and being brought before Vespasian, he would have

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been sent to Nero, had he not—according to his own account, for J. is his own and his sole biographer—prophesied that his captor would yet become emperor of Rome. Nevertheless, he was kept in an easy imprisonment about three years. J. was present in the Roman army at the siege of Jerusalem by Titus; and after the fall of the city (A.D. 70), was instrumental in saving the lives of some of his kindred. After this, he appears to have resided at Rome, busied in literary studies and labors. The exact period of his death is not ascertained. It is known only that he survived Agrippa II., who died A.D. 100. He was thrice married, and had children by his second and third wives. His works are: *History of the Jewish War*, 7 books, in both Hebrew and Greek (the Hebrew version is no longer extant); *Jewish Antiquities*, 20 books, containing the history of his countrymen from the earliest times till the end of the reign of Nero (the fictitious Hebrew *Josippon*, translated into Arabic, Latin, German, and English, which for 900 years, and till recently, was identified with J.'s *Antiquities*, is now known to date from the 10th c.); treatise on the *Antiquity of the Jews*, against Apion, 2 vols., valuable chiefly for its extracts from old historical writers; and *Autobiography* (A.D. 37-90), which may be considered supplementary to the *Antiquities*. The other works attributed to him are not believed to be genuine.

The peculiar character of J. is not difficult to describe. He was, in the main, honest and veracious; he had a sincere liking for his countrymen, and more pride and enthusiasm in the old national history than he could well justify; but the hopelessness of attempting to withstand the enormous power of the Romans, and an aversion to martyrdom, caused him to side with the enemy:—perhaps in the faint hope of being thus of some use to the national cause. From Vespasian he received honors and estates which were confirmed to him under Titus and Domitian. The influence of Greek philosophy and learning is visible in all his writings, and, as far as biblical history is concerned, infused into it a tone of 'rationalism,' an unconscious reflection of the pagan thought around him. He speaks of Moses as a human, rather than a divinely inspired law-giver; he doubts the miracle in the crossing of the Red Sea; the swallowing of Jonah by the whale; and, generally speaking, whatever is calculated to teach that there was a special miraculous Providence at work concerning the chosen people. His style is easy and elegant, and J. has often been called the Greek Livy. The *editio princeps* of the Greek text appeared at Basel (Froben) 1544. Since then, the most important editions (with notes) are those of Hudson (Oxford 1720), Havercamp (Amst. 1726), Oertli (Leip. 1782-85), Richter (Leip. 1825-27), and Dindorf (Paris 1845). J. has been frequently translated; the two best known versions in English are by L'Estrange (Lond. 1702) and Whiston (Lond. 1737).

JOSHUA, *jōsh'û-a* Heb. *Yehoshua*, 'Jehovah helps': celebrated Hebrew warrior, lieutenant and successor of Moses, under whose leadership the land of Canaan was

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conquered: b. in Egypt; son of Nun, of the tribe of Ephraim. Before the Israelites had reached Sinai, he was chosen by Moses to command the troops that fought against Amalek; and shortly before the death of the great lawgiver, he was publicly invested by the latter with the whole civil and military government of the Israelites. The vigorous and, on the whole, successful manner in which he pursued the conquest of Canaan, and distributed the land among the tribes, is minutely described in the book which bears his name. He died at the age of 110, and was buried at Timnath-Serah, in Ephraim.

JOSHUA, Book of: one of the canonical books of the Old Testament; a continuation of the Pentateuch; containing an account of the conquest and division of the 'Land of Promise.' The writer is unknown; but large portions show by their minute details that they are from the hand of one who lived at the period described; also such passages as that relative to the harlot Rahab—'and she dwelleth in Israel unto this day' (vi. 25)—demonstrate their own antiquity. Nothing can be adduced against the conjecture that the main portions were written by the hand, or under the eye of Joshua himself. On the other hand, such passages as the narrative of the capture of Hebron, which did not take place till after the death of J.; the frequency of the expression, 'unto this day,' in connections that forbid us to suppose the interval a brief one; the allusion to Judah and Israel as distinct (xi. 21); the lateness of many of the grammatical forms, etc., clearly indicate the addition of portions to the book by a later hand, which may probably have been in the reign of Saul or of David, and to which may have been added a further supplement, with a general revision, by a compiler in the time of Manasseh. A Samaritan Book of Joshua (*Chronicon Samaritanum*), containing a chronological narrative of events from the death of Moses to the time of the Roman emperor Hadrian, compiled from Arabic and Hebrew sources, about 1300, is extant in Arabic, and was edited first at Leyden 1848, by Juynboll, with a Latin version. It differs considerably from the canonical Book of Joshua, of which it is a revision, with Samaritan fables added.

JOSIAH, *jō-sī'ah*, (Heb. *Yoshiyahu*, 'Jehovah will help'), King of Judah: B.C. 649–610 (reigned B.C. 641–610); son of Amon and Jedidah. He succeeded his father at the age of eight years. He was apparently brought up under the care of the priesthood, early manifested a pious disposition, and became a determined religious reformer, purging Judah and Jerusalem from idolatry, and even dealing in like manner with the land of Israel, which for more than a hundred years had been a loosely governed portion of the Assyrian empire, and whose Israelitish people had been largely carried into exile, and their place supplied by heathen colonists. In the reign of J., Hilkiah the high priest found the *Book of the Torah* (Law)—by which some understand Deuteronomy, others Exodus, and others (improbably) the whole Pentateuch—while the workmen

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were repairing the temple after perhaps 200 years of neglect. J. does not appear to have known of the book before; at least, the words of it excite in him a sense of the guilt of his nation and a deep fear of Divine anger against the long continued disobedience and neglect of the ancient law. So the king summoned his people and observed the feast of the Passover after the manner of the fathers, with a dignity and splendor unequalled for a long period before. After this, he continued his work of extirpating every trace of idolatry. Wizards, conjurors, 'all the abominations' that could be 'spied in the land,' were 'put away.' In these efforts, the monarch seems to have spent the greater part of his reign. He met his death after a reign of 31 years, at Megiddo, in the valley of Esdraelon, when attempting to check the advance of Pharaoh Necho through his kingdom against the Assyrians. (Compare *Herod.* II. 159.) J. was the last of the good kings of Judah. In his days prophesied Jeremiah and Zephaniah.

JOSIKA, *yō shē-kōh*, MIKLÓS (NICHOLAS), Baron: greatest Hungarian novelist: 1794, Apr. 28—1865, Feb. 27; b. Torda, Transylvania; of a distinguished and wealthy family. In his youth, he served in the Austrian army, but resigned his commission 1818, married a Hungarian heiress, and for many years applied himself to agriculture and study. This marriage was not happy, and ended in a separation. After 29 years, he became a Protestant, obtained a divorce, and married a second time, living in this union happily till his death. His first works appeared 1834 under the titles *Irány* and *Vázlatok*, and were exceedingly popular. From that period till the revolution in 1848, he wrote about 60 vols. of novels, all published at Pesth. The most important are *Az utolsó Bátory* (The Last Bátory, 3 vols. 1840), *Zrinyi a Költő* (The Poet Zrinyi, 4 vols. 1843), *A Csehek Magyarországon* (The Bohemians in Hungary, 4 vols. 1845), and *Jósika István* (Stephen Josika—one of the author's ancestors—5 vols. 1847). Involved in the Hungarian revolution, he was compelled to abandon his native country, and afterward resided at Brussels, where he continued his literary labors. In 1864, he removed to Dresden, where he died. Among his productions in exile, are *Egy Magyar Családa forradalom Alatt* (A Hungarian Family during the Revolution); *The Mailly Family*; and *Ezter* (Esther). J. is a thoroughly national novelist, and drew his materials almost wholly from the history of his own land, of which he had profound knowledge. He has been called the Walter Scott of Hungary. Many of his novels have been translated into German.

JOSS, n. *jōs* [Chinese, *joss*, deity, said to be adapted from the Port. *Dios*, God]: in *China*, the Penates or household gods of every family, whose religious worship is that of their ancestors. JOSS-HOUSE, a temple for the worship of Chinese gods and ancestors. JOSS-STICK, *jōs stik*, a reed covered with perfume, and burned before an idol.—The application of the word *Joss* to the Deity arose through the attempts of Jesuit missionaries in Canton to teach the

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Chinese the name of God (Lat. *Deus*), which in Chinese utterance became Joss, and was used in their talk with Europeans in reference to their gods and to God as known by Christians.

JOST, *yöst*, **ISAAK MARKUS**: 1793, Feb. 22—1860, Nov. 20; b. Bernburg: eminent Jewish scholar of Germany. His principal works are *Geschichte der Israeliten* (History of the Israelites, 9 vols. Berl. 1820–29, his chief work; to which was added a tenth, 1846–49, *Neuere Geschichte der Israeliten von 1815–45*; *Allgemeine Geschichte des Jüd. Volkes* (Universal History of the Jewish People, 2 vols. Berl. 1831–2); a Translation (into German) of the Mishna with text and commentary (6 vols. Berl. 1832–34); *Gesch. des Judenthums*, etc. (3 vols. Leipsic, 1857–59). He also edited a journal *Israelitische Annalen* (Fkf. 1839–41). Besides being a savant, he was a patriot, and warmly interested himself in behalf of the social and political liberties of his countrymen.

JOSTLE, v. *jös'l* [OF. *jouster*, to tilt (see **JOUST**)]: to push against rudely; to run against and shake. **JOSTLING**, imp. *jös'ling*. **JOSTLED**, pp. *jös'ld*.

JOT, v. *jöt* [Gr. *ῥῶτᾱ*, the smallest letter in point of size of the Greek alphabet: Heb. *yod*, the smallest letter of the Heb. alphabet, jot: Dut. *jot*; Sp., It. *jota*, a jot, a tittle]: to note a thing down at once in a memorandum-book as it occurs; to set down: N. the least thing or quantity; a small portion of anything; a tittle; a point. **JOT'TING**, imp.: N. a memorandum. **JOT'TED**, pp. *Note*.—Wedgwood connects *jot* with the OE. *to jot*, meaning to touch, jog, or nudge, derived from the Dut. *jotten*, to jolt: prov. Sw. *datta*, a touch; *detta*, to fall, whence, from the connection arising from a short movement and a lump or piece, *jot* is used for a small portion, and he affirms that the resemblance to Gr. *ῥῶτᾱ* is accidental: Mackay, again, connects *jot* with Gael. *diod* = *jöt* or *jöd*, a drop, a point.

JOTUNS, *yō'tünz*, or **JÆTTENS**: in Scandinavian mythology, giants who dwelt in forests and caves amid treasures of gold and silver; personifications of evil and malignity. Though they were immense in size and physical strength, they were so feeble in intellect that they were always defeated in the wars that they waged continually on the smaller and weaker but brighter gods of Valhalla. Their home was called Jotunheim, the home of darkness and dullness, and they practiced a kind of witchcraft, vainly hoping thereby to prevail against the more intellectual divinities.

JOUBERT, *zhó-bär'*, **BARTHELEMY-CATHERINE**: 1769, Apr. 14—1799, Aug. 15; b. Pont-de-Vaux, France: soldier. He joined the French army 1791, was made a gen. of brigade on the battle-field 1795, distinguished himself on the Rhine, was praised and sent to Paris with trophies of his victories by Napoleon; and under the order of the Directory was successively commander of the army in Holland, Mentz, and Italy. He invaded the Tyrol, occupied Piedmont and proclaimed the revolution there, secured great quantities of war material in Turin and elsewhere, and con-

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tributed largely to Napoleon's successes at Montenotte, Mondovi, and Rivoli. Offended at an order of the Directory he resigned his command early in 1799. After the French disasters in July, he was summoned to take Gen. Moreau's place, and Aug. 15 was attacked by the Russians and Austrians under Souvarow at Novi, and killed while leading a charge.

JOUDPORE, *jôd-pôr*, or JODHPUR, *jôd-pôr*, or MARWAR, *mâr-wâr*: state in Hindustan; most extensive and populous of all the principalities of Rajpootana; 37,000 sq. m.; revenue about £250,000. J. is chiefly within the basin of the Luni; and its central parts, being level and well watered, are highly productive, yielding wheat, opium, tobacco, and cotton. Pop. 1,750,400.

JOUDPORE, or JODHPUR: city in Rajpootana, Hindustan, cap. of the protected state of J.; lat. 26° 19' n.; long. 73° 8' e. Besides several magnificent tanks, the place is remarkable for elaborately constructed and deep wells. Pop. supposed abt. 80,000.

JOUFFROY, *zhî-frwâ*, THÉODORE SIMON: French philosopher: 1796, July 7—1842, Feb. 4; b. Pontets, a village of the Jura. In youth he began the study of philosophy, and became a teacher of it, and 1832 a prof. in the Collège de France. Lack of health compelled him to resign his professorship 1837. His works consist chiefly of studies of the Scottish philosophy, and he published translations of the works of Reid and some of those of Dugald Stewart with notes and introductions. Of his original works, the most valuable is *Mélanges Philosophiques* (1833). He was known also as a political writer, and 1824 took part in establishing the newspaper *Le Globe*. He was for some time a member of the chamber of deputies, and was a follower of Guizot, though he gained no distinction in the political sphere.—J. rejected the skeptical philosophy of Hume as he found it set forth in Kant, and was drawn toward the philosophy of 'common sense' (q.v.) represented by Reid and Stewart. His most important work is *Cours de Droit Naturel*. J. had a lucid style, and a singular gift at generalizing great historic movements of thought. His natural eclecticism prevents his being assigned to any one school. He originated no system; but he admirably mediated between Scotch and French, and German and French philosophic schools.

JOUFFROY D'ARBANS, *zhô-frwâ dâr bông*. CLAUDE FRANÇOIS DOROTHÉE, Marquis DE: about 1751—1832; b. Franche-Comté, France: mechanician. He entered the army in early life, was appointed supt. of inf. 1772, and during a subsequent exile in Provence began studying the navigation of sailing vessels. In 1775 he conceived the idea of propelling boats by steam-power, and having familiarized himself with Chaillot's new fire-engine, constructed a small steam propeller, which he exhibited on Doubs river 1776, June. His first experiment was a failure, but he was more successful 1780 and 83, and applied to the govt. for a patent. His application and steam-vessel were referred to

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the Acad. of Sciences, and on its adverse report, the application was refused 1784, Jan. 31. J. then spent some years in England, and after his return to France resumed his experiments, secured his patent 1816, and formed a company to build and operate a new steam-boat. This venture proved unsuccessful, and he retired to the Hôtel des Invalides, where he died. He claimed the discovery of steam navigation, and after his death Arago and the French Acad. recognized it.

JOUISANCE, n. *jó'í-sǎnz* [F. *jouissance*, enjoyment, fruition]: in *OE.*, jollity; merriment.

JOULE, *jól*, JAMES P., F.R.S., LL.D: distinguished experimental philosopher: 1818, Dec. 24—1889, Oct. 14; b. Salford, England. In his youth, he had the good fortune to have for instructor in science the celebrated Dalton; and he early constructed for himself electrical machines and other philosophical instruments. His earliest notable experiments were with reference to electro-magnetic engines; from which he passed to quantitative determinations regarding heat, and the transformation of various forms of energy (see **FORCE**). He is justly entitled to be considered as the experimental founder of the modern theory of conservation of energy—one of the grandest generalizations ever made in physical science. In 1878 a civil list pension of £200 was conferred upon him.

JOUNPUR, *joun-pór'*: town in the N.W. Provinces of India, cap. of the district of J.; on both banks of the Gumti, here crossed by an ancient bridge, so strong as to be periodically submerged without injury; lat. 25° 44' n., long. 82° 44' e. This structure is commanded by a fort still older than itself, a work of the latter half of the 14th c. Pop. (1881) 42,845.

The *district* of Jounpur, 1,555 sq. m., produces large quantities of sugar: pop. of dist. (1872) 1,025,869.

JOURDAN, *zhór-dǒng'*, JEAN BAPTISTE, Comte: French marshal: 1762, Apr. 29—1833, Nov. 23; b. Limoges, where his father was a surgeon. He early entered the army, embraced with great zeal the cause of the Revolution, and soon rose to the rank of gen. of division. In 1793, Sep., he obtained the command of the Army of the North, and Oct. 16 gained an important victory at Wattignies. In 1794, he commanded the Army of the Meuse and Sambre, and prosecuted the war with great vigor and success. In 1796, he pushed his way far into Germany, but was driven back by Archduke Charles; and this led to his resignation of his command. In 1799, the Directory intrusted him with the command of the Army of the Danube; but he was defeated by Archduke Charles at Stockach. Although he opposed the *coup-d'état* of the 18th Brumaire, the First Consul employed him, 1800, in the re-organization and administration of Piedmont; and on the establishment of the Empire 1804, he was made a marshal and member of the council of state. He accompanied King Joseph to Naples, and afterward to Spain, and in his service he was actively employed as a general. He offered his services to Napoleon after his return from Elba. Louis XVIII.

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made him a count 1815. In 1819, he was made a peer of France; but his republican principles led him to enter heartily into the revolution of 1830. He lived and died poor.

JOURNAL, n. *jér'nāl* [F. *journal*, OF. *jornal*, a journal, a newspaper—from mid L. *diurnālē*, and *jornālē*—from L. *diur'nūs*, daily—from *dies*: F. *jour*, a day: It. *giornale*]: account or register of daily transactions and events; a merchant's business-book in which the daily transactions are entered from the waste-book; a ship's log-book; a paper published daily; a newspaper or magazine (see **NEWSPAPER**); in a *machine*, the neck or bearing part of a shaft that works in a plummer-block, upon which the shaft turns and is supported: **ADJ.** in *OE.*, every day; daily. **JOUR'NALIZE**, v. *-iz*, to enter in a journal. **JOUR'NALIZING**, imp. **JOUR'NALIZED**, pp. *-izd.* **JOUR'NALISM**, n. *-izm* [F. *journalisme*]: the management of a newspaper; the profession of editing or writing for journals. **JOUR'NALIST**, n. *-ist* [F. *journaliste*]: one who conducts a newspaper; a newspaper editor; a writer connected with the press. **JOUR'NALIS'TIC**, a. *-is'tik*, pertaining to journals or journalism: see **NEWSPAPER**.

JOURNEY, n. *jér'nī*, **JOUR'NEYS**, n. plu. *-nīz* [F. *jour-née*; Sp. *jornada*—from mid. L. *jornāta*, a day's work (see **JOURNAL**)]: travel by land or sea; passage from one place to another. **JOURNEY**, v. to travel; to pass from one place to another. **JOUR'NEYING**, imp.: N. a travelling from one place to another. **JOUR'NEYED**, pp. *-nid.* **JOUR'NEYER**, n. *-nī-ér*, one who travels. **JOUR'NEY-MAN**, n. *strictly*, a workman hired by the *day*, or for a period; a workman, as distinguished from an apprentice; a mechanic; in *OE.*, a bad or indifferent workman. **JOURNEY-WORK**, work done by the day; work done for hire. **JOURNEY-BATED**, in *OE.*, jaded and worn out by travel.—**SYN** of 'journey, n.': tour; travel; excursion; expedition; trip; pilgrimage; voyage; passage.

JOUST, n. *jōst* or *jūst* [OF. *jouste*; F. *joute*, a joust or tilt—from OF. *jouster*, to tilt—from mid. L. *juxtūrē*, to draw near, then to fight hand to hand: It. *giostrare*, to tilt; Sp. *justa*, a tilt; connected with Eng. **JOSTLE**]: an encounter on horseback with lances; a mock fight, as at a tournament: V. to engage in a mock fight on horseback. **JOUST'ING**, imp. **JOUST'ED**, pp. **JOUST'ER**, n. one who jousts or tilts.—*Jousts* were exercises of arms and horsemanship, performed in the middle ages by knights and nobles. The combatants engaged one another singly, each against his antagonist, and not in a troop, as in the Tournament (q.v.). The number of courses to be run and strokes to be given was generally three, but sometimes more. The weapon most in use was the lance, but sometimes the battle-axe and sword were used. To direct the lance anywhere, but at the body of the antagonist, was reckoned foul-play. In the joust of peace, or *joute de plaisance*, a foot encounter preceded the mounted combat. In the 15th c., the usages of jousting had come to differ in different countries to such an extent, that an elaborate

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treatise was written in explanation of the various modes, distinguishing the characteristic differences.

JOUTEL, *zhô tēl'*, **HENRI**: b. Rouen, France, abt. 1651: explorer. He entered the French army at an early age, accompanied Robert La Salle (q.v.) on his exploring expedition to the mouth of the Mississippi river 1684, completed and commanded Fort St. Louis, took part in the second expedition, and was present at the assassination of La Salle 1687, and returned to Rouen 1688. He wrote *Journal historique du dernier voyage, que feu M. de la Salle fit dans le Golfe de Mexique* (Paris 1713).

JOVE, n. *jōv* [L. *Jovis*, or *Jūpītēr*: the Gr. name is *Zeus*]: among the *Romans*, the king of the gods (see **JUPITER**). **JOVIAL**, a. *jō'vī āl* [OF. *jovial*—from mid. L. *jovī-ālīs*, pertaining to Jupiter, sanguine, jovial]: gay; merry; joyous; expressive of mirth and hilarity—qualities supposed to belong to one born under the influence of the planet Jupiter or Jove. **JO'VIALLY**, ad. *-lī*. **JO'VIALITY**, n. *-āl'ī-tī*, or **JO'VIALNESS**, n. merriment; conviviality; noisy mirth. **JOVIAN**, a. *jō'vī-ān*, of or pertaining to Jupiter or Jove. **JOVICENTRIC**, a. *jō-vī-sēn'trīk* [L. *Jovis*, genit. of *Jupiter*; *centrum*, a centre]: in *astron.*, having its centre of attraction on the planet Jupiter; said of its satellites. —**SYN.** of 'jovial': mirthful; joyous; merry; airy; gleeful; gay; festive; jolly; cheerful.

JOVELLANOS, *cho-vēl-yá'nōs* (or **JOVE LLANOS**), **GASPAR MELCHIOR DE**: 1744, Jan. 5—1811, Nov. 27; b. Gijon, Spain: lawyer. He was educated in the universities of Oviedo, Alcala, and Avila, first with the view of entering the priesthood, and afterward of practicing law. In 1767, Oct., he was appointed judge of the criminal court of Seville, 1778 was called to Madrid and appointed judge and alcade of the royal household and court, and 1780 was raised to the council of milit. orders. In 1787 he prepared his noted work, *Informe sobre un proyecto de Ley Agraria*, and 1790 was virtually banished to his birthplace, because of his intimacy with François Cabbarus, the French financier, who had incurred the enmity of Manuel de Godoy, then powerful at court. The ensuing 7 years were passed in the province of Asturias and chiefly in Gijon, in literary work and in establishing the noted Asturian institution for agricultural, industrial, social, and educational reform. In 1797 he was recalled to Madrid, and tendered the office of minister to Russia, which he declined, and minister of grace and justice, which he accepted. Soon afterward he opposed Godoy's policy and conduct, and was again retired to Gijon, where 1801 Godoy had him arrested, hurried to Barcelona, and transported to Majorca. He remained in prison there till 1808, recovering his liberty on the French invasion of Spain. Rejecting brilliant overtures from Joseph Bonaparte after he had gained the Spanish throne, J. joined the patriotic party and aided in reorganizing the cortes. He returned to Gijon early in 1811, but the advance of the French soon forced him to take refuge in Viga, where he died. His poetical works include the tragedy *El Pelayo*,

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the comedy *El Delincuente Honrado*, and numerous satires and miscellaneous pieces, and his prose works, beside *Ley Agraria*, *Elogios*, and *Memorias Politicas*.

JOVIAL, JOVIALITY: see under JOVE.

JOVIANUS, *jō-vī-ā'nūs*, FLAVIUS CLAUDIUS, Roman Emperor: abt. 332–364, Feb. 17 (reigned 363, June 27–364, Feb. 17); b. Singidunum in Mœsia; son of the general Varronianus. As capt. of the life-guards, he accompanied the emperor Julian in the Persian campaign in which the latter was killed 363, June 26, and on the following day, after the venerable Sallust had declined the succession J. was proclaimed emperor by the generals and army. His first care was to extricate his famished and exhausted army from its perilous position in a hostile country, and this he did by continuing the retreat begun by Julian to the Tigris and then surrendering to the Persian king Sapor II. all the provinces beyond it. He then pushed on toward Constantinople, and stopping at Antioch proclaimed himself a Christian, issued an edict re-establishing Christianity and also guaranteeing protection to pagans, and restored Athanasius (q.v.) to the see of Alexandria, from which he had been driven by the Arians. He made another halt at Tarsus to render funeral honors to Julian's remains, reached Ancyra and assumed the consulship with his infant son as colleague 364, Jan. 1, and making a fourth stop at Dadas-tana, a small town of Galatia, was found dead in bed Feb. 17. Over-eating, burning charcoal fumes, and poison have been variously assigned as the cause of his death. He was succeeded by Valentinian and Valens after a 10-days' inter-regnum.

JOVINIAN, *jō-vīn'ī-an*, or JOVINIANUS, *jō-vīn-ī-ā'nūs*, or JOVIA'NUS: Roman monk, condemned as a heretic by a synod convened by Pope Siricius A.D. 390, because of his opposition to the prevailing ascetic tendencies. Little is known of his life save what Jerome—who had no personal acquaintance with him—recorded in his bitter polemic *Adv. Jovinianum Libri II*. According to this he was living in Rome A.D. 388, had a large acquaintance with the Scriptures, composed several religious works, and lived the celibate life of an ascetic monk till his 'heretical' change of view, when he became a self-indulgent epicurean. The condemnation by the synod of Pope Siricius was repeated by a synod convened in Milan by Ambrosius, after J. and his followers had taken refuge in Milan. He died between 390 and 406. Some of the 'heretic' views promulgated by J. have been recognized by modern church historians as constituting an important part of the principles of Protestantism. His chief doctrines were (1) that in point of merit there was no difference between virginity, widowhood, and the married state; (2) there was no difference between abstinence from food and thankful enjoyment of it; (3) those who have been regenerated in baptism cannot be tempted by the devil; (4) all who preserve baptismal grace shall receive the same reward in the kingdom of heaven.

JOVIUS—JOY.

JOVIUS, *jō'vī-ūs*, **PAULUS** (or **PAOLO GIOVIO**): 1483, Apr. 19—1552, Dec. 11; b. Como, Italy: historian. He was educated by his brother, who desired him to become a physician; and after studying the humanities and philosophy, he took a medical degree in the Univ. of Pavia. But his preferences were for a literary career, and while a student he was ambitious to become the great historian of his country or time. He studied closely the Latin classics to acquire their style, and then applied himself to compiling a *History of his own Times*. About 1516 he went to Rome, presented the portion of his work then completed to Pope Leo X., and was so highly complimented by the pope that he took up his residence in the city and resumed his history. Honors then came to him rapidly. Cardinal Giulio de Medici attached him to his court; Pope Adrian VI. presented him a canonry in his native town; and Pope Clement VII. gave him special apartments in the Vatican with maintenance for servants befitting a courtier, and, after the sacking of Rome, appointed him bp. of Nocera. He executed several important and confidential missions for the family of the Medici, but was unable to gain the favor of Pope Clement's successor, Paul III. J. wrote in Latin, acknowledged himself a flatterer and lampooner, and used 'a golden and an iron pen according as people paid him for honorable mention.' His *History* covered the period from the invasion of Charles VIII. to 1547, was contained in 45 books, of which 6 are missing, and has never been considered trustworthy.

JOWETT, *jow'ēt*, **BENJAMIN**, LL.D.: educator: b. Camberwell, England, 1817. He was educated at St. Paul's School, elected to a scholarship at Balliol College, Oxford, 1835, and to a fellowship 1838; was ordained deacon in the Church of England 1842, priest 1845; became a tutor in Balliol College 1842, regius prof. of Greek 1855, master 1870, member of the hebdomadal council of Oxford Univ. 1875, and vice-chancellor for four years 1882; and was an examiner of classical schools 1849 and 53, classical moderator 1859, and member of the commission to prepare examinations for the E. India civil service. His publications include *The Dialogues of Plato translated into English*, 4 vols. (1871); *Thucydides translated into English*, 2 vols. (1881); and *The Politics of Aristotle*, 2 vols. (1885). He received the hon. degree LL.D. from the Univ. of Leyden 1875, and the Univ. of Edinburgh 1884.

JOWL, n. *jōl* [see **JOLE**]: the face or cheek; the check or head of a pig salted. **JOWLS** for **JOLLS**: see **JOLL**, and note under **JOLT**.

JOY, n. *joy* [F. *joie*, or *joye*; It. *gioia*, joy, a jewel: Sp. *joya*, a jewel: It. *godere*, or *gioire*: F. *jouir*, to enjoy—from mid. L. *gaudīa*, joy—from L. *gaudēre*, to rejoice, to be glad]: the pleasing emotion arising from good enjoyed or expected; happiness; gladness; a term of endearment: V. to rejoice; to be glad; to exult; in *OE.*, to gladden; to enjoy; to have happy possession of. **JOY'ING**, imp. **JOYED**, pp. *joyd*. **JOY'FUL**, a. *-fūl*, very glad; exulting; happy;

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blissful. JOY'FULLY, ad. -lĭ, with joy; gladly. JOY'FULNESS, n. -nĕs, great gladness. JOY'LESS, a. destitute of joy; giving no pleasure or joy. JOY'LESSLY, ad. -lĭ. JOY'LESSNESS, n. -nĕs, state of being joyless. JOYOUS, a. joy'ūs, gay; merry; giving joy. JOYOUSLY, ad. -lĭ. JOYOUSNESS, n. -nĕs, the state of being joyous. JOYANCE, n. joy'āns, in *OE.*, gaiety; festivity.—*SYN.* of 'joy, n.': pleasure; delight; rapture; bliss; felicity; ecstasy; mirth; gayety; merriment; festivity; hilarity; exultation; exhilaration;—of 'joyous': glad; jubilant; lively; gleeful; blithe; mirthful; joyful; sportive; festive, happy; blissful delightful; charming.

JUAN, DON: see DON JUAN.

JUAN D'AUSTRIA, DON: see JOHN OF AUSTRIA.

JUAN FERNANDEZ, jū'an fĕr-nān'dĕz, Sp. *chó-án' fĕr-nān'dĕth*, called also MAS-A-TIERRA, *mās-á-te-ĕr'rā*: rocky island in the Pacific Ocean, about 400 m. off Valparaiso, on the coast of Chili, to which it belongs; lat. 33° 40' s., long. about 79° w., named from its discoverer: see FERNANDEZ, JUAN. It is 18 m. long, 6 m. broad, and mostly covered with high rocky peaks, the highest of which, Yungu, is about 4,000 ft. above sea level. There are also numerous and fertile valleys, which yield oats, turnips, apples, strawberries, melons, peaches, figs, grapes, sandal-wood, and other varieties of timber. Numbers of wild-goats wander on the cliffs. In 1872 there were only about a dozen Chilians living on the island; and they were dependent on Valparaiso for a supply of most of the necessities of life. Here Alexander Selkirk, a buccaneer, whose native place was the Scotch fishing-village of Largo, lived in solitude for four years (1704-08): his story is supposed to have suggested the *Robinson Crusoe* of Defoe.

JUAREZ, jó-á'rĕz, S. *chawá rāth*, BENITO, President of the Mexican Republic: abt. 1807-1872, June 18; b. Ixtlan, of Indian parents. Notwithstanding disadvantages of birth, he established a reputation as an advocate, became gov. of his native state, Oaxaca (1848-52), and an active member of the liberal party. Exiled during the dictatorship of Santa Anna, he returned when the republic was restored, was elected to the new congress (1856), and appointed pres. of the supreme court 1857, and consequently, in case of vacancy by death or default, president *ad interim* of the republic.

On the overthrow of the liberal pres., Comonfort, by Zuloaga and the clerical party 1858, Jan., J. refused to recognize the usurper, and finally established himself at Vera Cruz, by holding which he secured the receipt of the customs dues—in other words, of the larger half of the entire state revenue. Here he set up a provisional government, styling himself Constitutional President, and issuing decrees for the confiscation of the property of the church, the institution of civil marriage, etc., in accordance with the reforms carried by Comonfort 1857. Meanwhile, Miramon, who had superseded Zuloaga 1859, Jan., prepared to take the field against his rival. His movements

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were delayed by a counter-rising of Juarists in Mexico; and before he again advanced, J. had secured recognition from the United States by conceding the protectorate (refused to them by Miramon) over the proposed transit routes in the north and in the isthmus of Tehuantepec. Early in 1860, Miramon besieged Vera Cruz, but his army suffered from want of supplies, his transports were intercepted by the U. S. ship-of-war *Saratoga*, and after a few weeks, he was compelled to retire with loss. J. now assumed the offensive. At San Miguelito, Miramon was totally defeated by Ortega, and fled to Europe. His rival entered Mexico 1861, Jan., caused himself in June to be formally elected pres. for four years, and proceeded to execute the decrees against the clergy with great severity. But the finances of Mexico were now in a state of disorder, which even the wholesale confiscation of church lands could not remedy. In 1861, July, the government decreed suspension of payment for two years of the indemnities due to England and France, and formally secured by the hypothecation of the customs dues. This act, following a long series of outrages (mainly the work of Miramon and his faction), led to the intervention of the allied powers, and the occupation of Vera Cruz by England, France, and Spain. But it soon appeared that the French aimed at more than a simple redress of grievances. The appearance of the clerical chiefs Miramon and Almonte in their camp, and the extravagant demands of M. de Soligny, rendered any arrangement impossible. The failure of the negotiations at Soledad 1862, Feb., was followed by the conference of Orizaba (Apr. 9), in which England and Spain formally withdrew. France now threw off the mask, and J. appealed to the country, proclaiming a guerrilla war, and concluding a loan of \$25,000,000 with the American minister, Corwin. The victory of Zaragoza at Puebla 1862, May 5, raised the hopes of the Mexicans; but fresh troops arrived from France. Puebla fell 1863, May 18, after a gallant resistance. Mexico and San Luis de Potosi followed, and 1864 the republican government was removed to Monterey. The arrival of Maximilian in May was succeeded by further losses from battle and desertion. In Aug., J. sent his family to New Orleans, but 'le petit Indien' himself still held on, though forced back on Chihuahua, and thence a year later across the frontier. His four years of office had expired, and Maximilian availed himself of these events to issue the fatal decree of 1865, Oct., in which he declared the republic extinct *de jure et de facto*, and sentenced to death all Juarist leaders taken in arms. J. proclaimed in answer that he held office until the expulsion of the invaders rendered a fresh election practicable. By this time the complete pacification of the southern states enabled the Washington cabinet (which had persistently recognized J.) to interfere effectually on his behalf. Under diplomatic pressure (1866), Napoleon withdrew his troops, and the positions evacuated by the French were immediately occupied by the republicans. The unhappy Maximilian made a final stand in Queretaro,

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but was betrayed by Lopez and shot 1867, June 19, by order of court-martial—an ungenerous but not unjustifiable act of reprisal for his mode of warfare on Mexico, which J., it is said, would have been unable to prevent. Mexico and Vera Cruz were reoccupied shortly after, and the triumph of the liberals was consummated by the re-election of J. to the presidency 1867, Oct., after a ten years' struggle, in which he had successfully maintained the constitution of 1857, under which he took office, against domestic treason and foreign intervention. He was re-elected pres. 1871, Oct., and held office till he died. J., as governor of Oaxaca, was universally esteemed, and his honesty as a reformer has been attested by the British chargé d'affaires (Mr. Mathew's Report, 1861), and by the leading public men in the United States.

JUBA, n. *jó'ba* [L. *jūbā*, a mane]: the long and thickly set hairs on the neck, spine, and chest of some animals; a mane; in *bot.*, a loose panicle; a dense cluster of awns, as in the spikes of certain grasses.

JUBÆA, *jó-bē'a*: genus of palms of the same tribe with the cocoa-nut. *J. spectabilis* is a palm 30 or 40 ft. high, with a wide-spreading crown of pinnate leaves; native of Chili, where it is called *Coquito*. The Chilians cut off the crown, and collect the sap, which flows freely for several months, a fresh slice of the top of the stem being cut off every morning. A good tree will yield 90 gallons of sap, which being boiled down to a syrup of the consistence of treacle, receives the name of *miel de palma* (palm-honey), and is an important article of the domestic economy of the country. The *Jubæa* is, in fact, the Jaggery (q.v.) palm of Chili.

JUBE, n. *zhō'bā* or *jó'bē* [F. *jubé*, the pulpit or gallery of a church]: in many *R. Cath. Chh.*, the rood-loft in a cathedral or church which parts the chancel from the choir, and which obtains its name from the custom of pronouncing or chanting from it the Latin words *Jubē Domīnē benedicēre*, 'Order or enable us to praise thee, O Lord,' these words forming the commencement of the compline.

JUBEIL': see BYBLOS.

JUBILANT, a. *jó'bī-lānt* [L. *jubilans*, or *jubilān'tem*, rejoicing, exulting—from *jubilum*, a joyous strain or sound: It. *giubilo*; Sp. *jubilo*, rejoicing, festivity]: uttering songs of triumph; thence, greatly rejoicing. **JUBILATE**, n. *jó'bī-lā'tē* [L. *jubilātē*, rejoice or sing joyfully]: a name given to the third Sunday after Easter, from the service of that day commencing in anc. times with the 66th Psalm, *Jubilātē Dēō, omnēs terræ*, 'Sing joyfully to God, all 'ye lands.' **JUBILATION**, n. *-lā'shūn* [F.—L.]: the declaration of triumph; a joyful shouting.

JUBILEE, n. *jó'bī-lē*, known also as the YEAR OF JUBILEE [F. *jubilé*, a jubilee—from mid. L. *jubilæus*, the jubilee—from Heb. *yóbel* or *jobel*, the blast of a trumpet, a shout of joy]: peculiar institution of a festival nature, among the Hebrews (Lev. xxv.), by which, every 50th (not 49th)

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year, the land that in the interval had passed out of the possession of those to whom it originally belonged was restored to them: lands and houses in walled cities, however, were excepted from the rule; these might be redeemed within one year after transfer; if not redeemed they passed into perpetuity to the new owner. All who had been reduced to poverty, and obliged to hire themselves out as slaves, were released from their bondage; no less were all debts remitted (Jos. Ant. iii. 12, 3). Hence in modern usage the term is loosely applied to any great occasion of public rejoicing, also to a musical performance on a vast scale. The jubilee formed, as it were, an exalted sabbatical year (q.v.), and the land was completely to be left to itself through the Jubilee year, as on the Sabbath day. The design of this institution was in an economical view chiefly the periodical restoration of equilibrium in the families and tribes. It was to prevent the growth of an oligarchy of landowners, and the total impoverishment of some families; as well as to increase the fertility of the soil and the growth of the population. But it had its deep significance in the relation of the Israelitish nation to Jehovah; 'The land shall not be sold in perpetuity; for the land is mine,' said Jehovah: 'for ye are strangers and sojourners with me' (Lev. xxv. 23). The Jubilee was proclaimed at the end of the harvest-time like the sabbatical year, on the tenth day of the seventh month—the day of atonement—by the yobel (a kind of horn), hence its name. There is no record in the whole history of the Hebrews down to the Babylonian exile, of any observance of the jubilee: after the return, however, it appears to have been rigorously kept, like the sabbatical year, for some time at least; but must soon have fallen into disuse. When the sabbatical year was *de facto* repealed by Hillel's *Prosbol* (a legal document entitling the creditor to claim his debt during this period), mention is no longer made of the yobel. The speculations of modern critics on the *possibility* of the yobel, and ingenious theories as to the date of its inauguration, cannot prevail against the undeniable fact that it has been kept; also that it is much more in harmony with the primitive theocratic character of the Mosaic institutions—according to which all the land was held as on a loan from Jehovah, who alone had absolute ownership of it—than with those of any later period, to which it otherwise would have to be referred. JU'BILEE, or JU'BILEE YEAR, institution of the Rom. Cath. Church, the name of which is borrowed from that of the Jewish jubilee. The Rom. Cath. jubilee is of two kinds—'ordinary' and 'extraordinary.' The ordinary jubilee is that which is celebrated for a year from Christmas to Christmas, at stated intervals, the length of which has varied at different times. Its origin is traced to Pope Boniface VIII., who issued, for the year 1300, a bull granting a plenary indulgence to all pilgrim-visitors to Rome during that year, on condition of their penitently confessing their sins, and visiting the church of St. Peter and St. Paul, 15 times if strangers, and 30 times if residents of the city. The invitation was accepted with mar-

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vellous enthusiasm. Innumerable troops of pilgrims from every part of the church flocked to Rome. Giovanni Villani, contemporary chronicler, states that the constant number of pilgrims in Rome, not reckoning those who were on the road going or returning, during the entire year, never fell below 200,000. As instituted by Boniface, the jubilee was to have been held every 100th year. Clement VI., in obedience to an earnest request from the people of Rome, abridged the time to 50 years. His jubilee accordingly took place 1350, and was even more numerously attended than that of Boniface; the average number of pilgrims, until the heats of summer suspended their frequency, being, according to Matthew Villani, no fewer than 1,000,000. The term of interval was still further abridged by Urban VI., and again by Paul II., who, 1470, ordered that thenceforward each 25th year should be held as jubilee—an arrangement which has continued ever since to regulate the ordinary jubilee. Paul II. extended still more, in another way, the spiritual advantages of the jubilee, by dispensing with the personal pilgrimage to Rome, and granting the indulgence to all who should visit any church in their own country designated for the purpose, and should, if their means permitted, contribute a sum toward the expenses of the Holy War. The substitution by Leo X. of the fund for building St. Peter's Church for that of the Holy War, and the abusive and scandalous proceedings of many of those appointed to preach the indulgence (q.v.), were among the proximate causes of the Reformation. In later jubilee years, the pilgrimages to Rome gradually diminished in frequency, the indulgence being, for the most part, obtained by the performance of the prescribed works at home; but the observance itself has been punctually maintained at each recurring period, with the single exception of the year 1800, in which, owing to the vacancy of the holy see, and the troubles of the times, it was not held.

The extraordinary jubilee is ordered by the pope out of the regular period, either on his accession, or on some occasion of public calamity, or in some critical condition of the fortunes of the church; one of the conditions for obtaining the indulgence in such cases being the recitation of certain stated prayers for the particular necessity in which the jubilee originated.

JUBILEES, *jô'bi-lêz*, BOOK OF: historical, chronological, and pseudepigraphical book, originally written in Hebrew by, it is believed, a remarkably well-informed orthodox Jew of Palestine, some time before the destruction of the temple in Jerusalem. It professes to comprise a revelation made to Moses while on Mt. Sinai with prophetic admonitions for the future; and derives its name from the division of the time of which it treats—from the beginning of the world till the entrance of the Israelites into Caanan—into *jubilees* or periods of 50 years. Following the historical sequence in Genesis and Exodus (whence the book is known also as the *Little Genesis*), and collating freely from the Hagada, the author or compiler arranged the great events in the

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jubilee, Sabbatic year, and year of their occurrence. From the Hebrew it was translated into Greek; nearly all of both texts were lost about the 11th or 12th c.; an Ethiopic version made from the Greek was found in Abyssinia 1844; a German translation from the ms. copy of the latter in the Tübingen Univ. was published 1849-51; and 1870 Rubin attempted to translate it back to the Hebrew. The Abyssinian Church regarded it as canonical, and Biblical students have found much in it to aid interpretation and elucidate Hebrew belief prior to the Christian era.

JUDÆ'A, or JUDEA: see PALESTINE.

JUDAH, *jū'da* (Heb. *Yehuda*, 'the praised'): fourth son of Jacob and Leah, and founder of the greatest and most numerous of the 12 tribes of Israel. In the march through the wilderness, it had the post of honor—the van—assigned to it; and tradition narrates that its standard was a lion's whelp, with the words: 'Arise, O Jehovah, and let thine enemies be scattered!' After the conquest of Canaan, its territories stretched from the Dead Sea on the e. to the Mediterranean on the w. (though the Philistines long held possession of the fertile district w. of the mountains of Judah), and from Jerusalem (excluding that city) on the n. to the land of the Amalekites on the s.: the capital was Hebron.

JUDAISM, n. *jō'dā-izm* [from *Judah*, greatest and most numerous tribe of the Jews]: the religious rites and doctrines, and the social system, of the Jews; conformity to the rites and religion of the Jews. JUDAIZE, v. *jō'dā-iz*, to conform to or practice Judaism; to affect the manners of the Jews. JUDAIZING, imp. *jō'dā-i'zing*: ADJ. conforming to the Jewish rites and religion. JU'DAIZED, pp. *-dā-izd*. JUDAIZER, n. *jō'dā-i'zēr*, one who conforms to the Jewish rites and religion (see EBIONITES). JUDAIC, a. *jō-dā'ik*, or JUDA'ICAL, a. *-i-kāl*, of or pertaining to the Jews. JUDA'ICALLY, ad. *-lī*. JUDA'IST, n. *-dā'ist*, an adherent of Judaism. JUDE'AN, n. *-dē'ān*, a native of Judæa: ADJ. pertaining to.

JUDAS-COLORED, a.: red; reddish;; from a tradition that the traitor Judas had red hair.

JU'DAS MACCABÆ'US: see MACCABEES.

JU'DAS'S TREE (*Cercis*): genus of trees of nat. ord. *Leguminosæ*, sub-order *Casalpinieæ*. The common J. T. (*C. Siliquastrum*) is a native of S. Europe, and of the warmer temperate parts of Asia. It has almost orbicular, very obtuse leaves. The flowers, rose-colored, appear before the leaves. There is a legend that Judas hanged himself on a tree of this kind. The American J. T. (*C. Canadensis*) is very similar, but has acuminate leaves. The flower-buds of both species are frequently pickled in vinegar. The wood of both species is very beautiful, veined with black, and takes an excellent polish.

JUDD, *jūd*, GARRITT PARMLEE: 1803, Apr. 23—1873, July 12; b. Paris, N. Y.: statesman. He acquired a medical education, was sent to Honolulu, Hawaii, by the Ameri-

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can Board of Missions 1828, accompanied Com. Wilkes in his exploring expedition 1840; resigned his office under the American Board to become recorder and interpreter at the court of Kamehameha III. 1842; organized the first native ministry 1843, became minister of finance, was engaged in treaty service in Europe and on a diplomatic mission in France, and did much to elevate the character of the natives and improve the capital city.

JUDD, ORANGE: editor: b. near Niagara Falls, N. Y., 1822, July 26. He graduated at Wesleyan Univ. 1847; taught school three years, studied analytical and agricultural chemistry in Yale 1850-53; became editor of *The American Agriculturist* 1853; and was its owner and publisher 1856-81. In 1853-63 he was also agricultural editor of the *New York Times*; 1863 served in the U. S. Sanitary Commission and with the Army of the Potomac; 1868 was pres. of a railroad on Long Island; 1871 gave Wesleyan Univ. the Orange Judd Hall of Natural Science, and was one of the trustees 1871-81; and (1862) originated the scheme afterwards developed into the International Sunday School Lessons.

JUDD, SYLVESTER: 1813, July 23—1853, Jan. 20; b. Westhampton, Mass.: Unitarian minister and author. He graduated at Yale 1836, declined a professorship at Miami College, graduated at Cambridge Divinity-school 1840, and was pastor of the Unitarian Church in Augusta, Me. 1840, Oct. 1 till his death. He is best known as the author of the romance *Margaret* (1845); he wrote also the poem *Philo* (1850); romance *Richard Edney* (1850); and discourses on *The Church* (1854). He left a ms. drama, *The White Hills*.

JUDE, *jūd*, EPISTLE OF: one of the smallest and least important books in the canon of the New Testament; placed among the *Antilegomena* (Doubtful Writings) by the primitive church, while some even considered it spurious. It was not made use of by the Asiatic churches until the 4th c., and does not appear to have been known in the West until toward the end of the 2d c. Those who quote it with respect, intimate some doubt concerning it; e.g., Clemens Alexandrinus, Origen, Jerome. This doubt appears to have been due largely to its quotation from an apocryphal book, the book of Enoch (see Jerome, *Catalog. Scr. Eccl.* 4); but the mere fact of such a quotation is not now regarded as of any decisive significance. At the Reformation, similar questions revived, and were entertained first by Luther and Calvin, and afterward by the Magdeburg Centuriators and Grotius. Modern critical opinion is not unanimous for its canonicity; some eminent scholars indeed deny it. Yet the preponderance of testimony seems in its favor, as is all its internal evidence drawn from its substance, style, and elevated sentiment.—Though of apostolic tone, it cannot be declared to be of apostolic authorship. The authorship is uncertain: it has long been attributed to Judas (or Jude) Lebbæus or Thaddæus, one of the 12 apostles; but is now by the majority of scholars as-

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cribed to Jude, a brother of James (see JAMES, THE JUST), and one of the brothers of the Lord Jesus. Its date was probably after the death of the apostle Peter, from whose second epistle it quotes (verses 17, 18); and it was probably not later than A.D. 80.

JUDGE, n. *jűj* [F. *juge*; Prov. *jutge*; It. *giudice*, a judge—from L. *judicem*, a judge]: the presiding officer in a court of law, who also awards punishment to offenders; a chief magistrate; one who has skill to decide on the merits or value of a question or cause; the Supreme Being: V. to hear and determine; to decide; to form or give an opinion; to distinguish; to pass sentence upon; to be censorious toward; to censure severely; to doom; to discern; to esteem; to reckon. **JUDG'ING**, imp. **JUDGED**, pp. *jűjd.* **ADJ.** sentenced. **JUDGE-ADVOCATE**, in *mil.*, a person appointed to superintend the proceedings of courts martial. **JUDGE'SHIP**, n. the office of a judge. **JUDGMENT**, n. *jűj'měnt* [F. *juge-ment*]: the act of judging; decision; determination; award; right or power of passing judgment; punishment inflicted by God; the sentence or decision of a court of law (see **JUDGMENT**, in Law): opinion; condemnation: that faculty of the mind which enables a man to ascertain truth by comparing facts and ideas (see **JUDGMENT**, in Logic). **JUDGMENT-DAY**, the time when God, through his Son Christ Jesus, will judge the world. **JUDGMENT-SEAT**, the seat on which a judge sits. **JUDGMENT-HALL**, a court of justice. **JUDGMENT OF GOD**, a term formerly applied to a judicial decision, by ordeal, single combat, and the like, in which it was imagined that God would vindicate innocence by impunity or success. **THE JUDGMENT**, the final trial of mankind. The doctrine of a judgment after death has always been associated with the belief in man's future existence, and is maintained as a doctrine of natural religion on the ground of that responsibility of which conscience always more or less distinctly testifies, and of the evident absence of a due proportion of rewards and punishments to human actions in this life. This doctrine, however, as a doctrine of the Christian religion, comprises elements not supplied by merely natural religion, such as the appearance in glory and power of the Son of man and Son of God in the person of the Lord Jesus Christ as judge. Then, to the few grand and simple teachings of the Bible, many additions have been made by theological inference, or by imagination kindled by the vivid figures used by prophets and apostles; but for these the Bible is not to be held responsible. The wisest Christian thinkers accept unreservedly its positive declarations of the principles on which the final judgment of the world by Christ shall proceed, but imitate its silence as to the details of time and place.—As a doctrine of revelation, the final judgment stands in close connection with the resurrection (q.v.) of the dead.—**SYN.** of 'judge, n.': umpire; arbiter; arbitrator; referee;—of 'judgment': estimate; opinion; notion; discernment; correctness; taste; criticism; discrimination; intelligence; sagacity; penetration; calamity; punishment; sentence; doom; judicatory; condemnation; statute.

JUDGE—JUDGE-ADVOCATE.

JUDGE: generic descriptive name of a public official legally commissioned to hear and decide cases brought for trial before him. In Great Britain—though it is otherwise in the United States—it is not usual to designate the highest class of judges by the epithet of judge, and British lawyers never do so. Thus, instead of saying Judge Blackstone, Judge Pollock, Judge Eldon, the proper description is—Mr. Justice Blackstone, Chief Baron Pollock, Lord Chancellor Eldon, etc., according to the particular court in which they presided. In the United States, the judges of the U. S. Supreme Court are now usually called 'Justices'; and the presiding judge of any supreme court, state or federal, is known as Chief-justice. In Scotland, the usual prefix to the name of a judge is Lord; and the judges there, on their appointment, often assume new titles in addition to the prefix 'Lord.' In England, the judges of the superior courts are called lords only while they sit in court, and are so addressed by counsel, but not elsewhere. The practice has long been for the crown to confer the honor of knighthood on all judges of the superior courts of law and equity in England, but not in Ireland or Scotland. All the superior judges are appointed by the crown, and since 12 and 13 Will. III. c. 2, have held their offices during good behavior; since 1 Geo. III. c. 23, they have also continued to hold their appointments notwithstanding the demise of the crown. They can be removed from their office only on the address of both houses of parliament. They all, except the master of the rolls, are disqualified from sitting in the house of commons. Judges have no privileges over other persons in respect of their obeying the law, except that the common-law judges in England have the privilege of suing and being sued in their own court, though not of judging in their own cases.

In the United States, a judge is not permitted to try a case in which he has an interest, nor to be witness in a case tried before him. No law prevents a judge from sitting for trial of a case in which he has been counsel; though usage and etiquette certainly are against it. A judge may be removed by impeachment if corrupt; but is not liable otherwise for any of his acts that are within the limit of his jurisdiction. See JUDICIARY in the United States.

The term judge has been appropriated in England as the proper descriptive title also of the judges of the county courts established 1846.—*Judge Ordinary*, in English law, is the descriptive title of one judge only—viz., the judge of the divorce and probate court. In Scotland, the phrase is often applied to all judges, superior and inferior, whenever they have a fixed and determinate jurisdiction, in distinction from commissioners, who have an occasional and temporary judicial authority delegated to them.

JUDGE-ADVOCATE: in the United States, a milit. officer (wherever practicable) who in the name of the govt. prepares cases, summons witnesses, and acts as prosecutor before and legal advisor to courts-martial, courts of inquiry, and milit. commissions. The J.-A. belongs to the bureau

JUDGE-ADVOCATE-GENERAL—JUDGES.

of milit. justice in the war dept., which (1889) comprised 1 judge-advocate-gen. with the rank of brig.gen., 1 asst. judge-advocate-gen. with the rank of col., 3 deputy judge-advocates-gen. with the rank of lieut.col., and 3 judge-advocates with the rank of maj. The judge-advocates are stationed at the headquarters of each of the 3 milit. depts. of the country, as legal advisers to the commanding gen., and are also assigned to the above general duties in their own depts. In cases where the regular army J.-A. cannot for any reason be assigned to court-martial or similar duty, a reputable lawyer in the locality may be engaged for the purpose.

JUDGE-ADVOCATE-GENERAL: chief of the bureau of military justice at Washington, who receives for revision and for record the proceedings of courts-martial, courts of inquiry, and military commissions. His rank is brig.gen. —In England, the J.A.G. is the supreme judge, under the Army Discipline and Regulation Act, of the proceedings of courts-martial, and is the adviser, in legal matters, of the commander-in-chief and sec. of state for war. Before confirmation, the sentences of all courts-martial, with the evidence adduced, are submitted to him; and it is for him to represent to the commander-in-chief any illegality of procedure, or other circumstance rendering it undesirable that the queen should be advised to confirm the court's decision. He is a member of the house of commons and of the ministry—changing, of course, with the latter. As it is essential that the judge-advocate-general should have an intimate acquaintance with the military law, as well as with the general law of the land, he is provided with an assistant or deputy, whose office is permanent, and who is selected from among barristers of eminence.—The *Deputy-Judge-Advocate*, in the English milit. service, is an officer holding a temporary commission as public prosecutor in every court-martial. He must be an officer of intelligence, as it is part of his duty to examine and cross-examine witnesses, to warn the members of the court of any illegality in their proceedings, and generally to fulfil, in the limited area of the court, the functions which belong to the judge-advocate-general in regard to the whole army.

JUDGES, BOOK OF (Heb. *Shoftim*): canonical book in the Old Testament, recording the achievements of those heroes who, at different periods in the early history of the Hebrews, before the consolidation of the government under a monarchy—during the more than 400 years from the death of Joshua to the reign of Saul—arose to deliver their countrymen from the oppressions of neighboring nations, or to guide a tribe or the whole people in some critical time. They were leaders in administration, magistrates, deliverers, guides. Only three of the 16 enumerated in the book, Deborah, Eli, and Samuel, were *Judges* in the modern sense of the word. They were usually chosen by the people, though in a few cases designated by direct Divine appointment; and they seem to have had a faculty of faith which made them receptive of an unusual degree of Divine

JUDGE'S CHAMBERS—JUDGMENT.

guidance and strength and gave them power with the people. Their office was not hereditary; they had no remuneration; they could not levy taxes or appoint officials; their functions were limited by the Hebrew law. Their record, as contained in the book, has given rise to much criticism. It is not a *history*, properly speaking. The events recorded in it do not follow each other chronologically, nor is there any other order evident in their arrangement. It is rather a collection of detached historical traditions from the time of the Hebrew republic, and its compilation may be assigned to a date between the great victory over the Philistines, and the beginning of David's reign. It exhibits (whether with a royalistic tendency, as has been supposed by some, or in order to point the lesson that however deeply sunk a people—emphatically *the* people—might be in slavery or idolatry, or both, God would always send them a deliverer at the right time) the lawless and ungodly state of Israel during the greater part of this period, and the evil consequences of their intimate connection with the idolatrous nations around them. The book naturally falls into two portions—the first, to chap. xvi., containing the heroic deeds of the single 'judges;' the second, from chap. xvii., the two accounts of the idol of Micah, and of the crime of Benjamin. The space of time over which the book extends has been hotly contested: the chronology is confused, and some of the events recorded were evidently not successive but contemporaneous. The book differs considerably from the other historical books of the Bible by its simplicity and originality. That most of the heroic adventures related contain—sometimes, perhaps, under a highly poetical guise—true historical facts, has been doubted by but a very small number of critics. Ancient traditions make Samuel the author, or rather redactor of the book, and there is certainly little to be said against, if not much for, this supposition. Compare Ewald, Wette, Rosenmüller, Studer, Keil, etc. See JEWS.

JUDGE'S CHAMBERS: originally in England, the place where a single common-law judge sits near Chancery Lane, London, in an informal manner, to hear attorneys make applications of an unimportant nature arising out of actions pending in court. If the judge refuse, or decide wrongly, there is an appeal to the court of which he is a judge. In general, a judge sits at chambers all the year round to dispose of these applications, which are chiefly matters of form, but of urgency. The present usage is to speak of a judge as 'in chambers' whenever he issues orders or performs judicial functions outside of his court.

JUDGMENT: see under JUDGE.

JUDGMENT, in Law: final determination of a law court in an action, when the litigation is at an end. In courts of equity, the more usual corresponding term is a decree or order, and in criminal and admiralty courts, a sentence. All judgments of the superior courts are, as a general rule, capable of being appealed against (see **APPEAL**). When a judgment is not appealed against

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within a certain time allowed for the purpose, then it is final, and binding on the parties. If the judgment is registered, it will have the effect of preventing the judgment debtor from selling or alienating his lands, but in general has no such effect on his goods and chattels or personal estate, except money invested in government stock. In order to make a judgment effectual in an action of debt, if the debtor refuses to pay, a further process is necessary on the part of the creditor, called execution (q.v.).

JUDG'MENT, in Logic: technical term for an affirmation of some kind or other, as 'snow is white,' 'man is mortal.' The contrast to it is a mere *notion*, as white, mountain, mortality. In a judgment, two notions must always enter, but this is not the whole; there must be some declaration coupling the two together, a function performed in all cases by a verb. A complete meaning, as expressed in a grammatical sentence, is a judgment. Other designations for the same thing are—proposition, assertion, predication.

The *intellectual faculty* called Judgment has reference to the logical force of the word, and means the power of forming judgments, and by implication, the further power of determining them to be true or false. This last function is perhaps what is most prominently implied in the faculty, as commonly understood. The intellectual power of judging, probed to its deepest foundations in the mind, resolves itself into one of two things—the discrimination of difference, or the perception of agreement in the midst of difference (see **INTELLECT**). A judge in a court of law finds that a case comes under, or does not come under, a certain statute; which finding constitutes his decision. A scientific man decides a theory to be true by a certain extent of coincidence with observed fact. An artist approves or disapproves a work of art by its agreeing or disagreeing with his standard, or those previous productions that have settled his conception of excellence in that species.

JUDIC, *zhü-dëk'*, **ANNA DAMIENS**: actress: b. Semur, Côte d'Or, France, 1850, July 17. She was educated for the stage at the Paris Conservatory, and made her first public appearance at the Gymnase Theatre 1867, June 2, in the *Grandes demoiselles*. She had remarkable success, played an engagement in Brussels 1871, became attached to the Bouffes-Parisiens, Paris, 1872, and was engaged at the Varieties 1876. She has since played in the principal cities of Europe and achieved fame in *La Timbale d'argent*, *La Petite reine*, *Le Grelot*, *La Rosière d'ici*, *La Branche cassée*, *Madame l'Archiduc*, *La Belle Hélène*, *La Pêrichole*, *Le Docteur Ox*, and *Les Charbonniers*.

JUDICA, n. *jô'di-kä*: the fifth Sunday in Lent, so named in Rom. Cath. Chh. from the service of the day beginning, *Ju'dica me*, *Dëüs*, 'Judge me, O God'—see Ps. xliii.

JUDICABLE, a. *jô'di-kä-bl* [mid. L. *jūdicābilis*—from L. *jūdicāre*, to judge, to be or sit as a judge (see **JUDGE**): that may be tried or judged. **JU'DICA'TIVE**, a. *-kä'tiv*, having power to judge. **JU'DICA'TORY**, n. *-kä'tér-ī*, a court

JUDICIAL—JUDICIAL SEPARATION.

of justice: **ADJ.** pertaining to a judge; judicial; dispensing justice. **JU'DICA'TURE**, n. *-kă'tūr* [*F. judicature*—from mid. *L. jūdicātūrā*]: a court of justice; the power or the system of distributing justice by legal trial and determination.

JUDICIAL, a. *jô-dish'ăl* [*OF. judiciel*—from *L. jūdicĭ-ālis*, of or belonging to courts of justice—from *jūdicēm*, a judge (see **JUDGE**)]: pertaining to courts of justice, or to a judge; proceeding from a court of justice; inflicted as a punishment. **JUDI'CIALLY**, ad. *-lĭ*. **JUDI'CIARY**, a. *-i-ēr-i*, pertaining to courts of justice; passing judgment. **JUDI'CIOUS**, a. *-ūs* [*F. judicieux*—from mid. *L. jūdicĭōsus*], wise; prudent; acting according to sound judgment. **JUDI'CIOUSLY**, ad. *-lĭ*. **JUDI'CIOUSNESS**, n. *-nēs*, the quality of acting or being according to sound judgment. **JUDICIAL BLINDNESS**, inability to see the proper course to be followed—a phrase applied to kings, a party in the state, etc. **JUDI'CIAL COMMITTEE OF THE PRIVY-COUNCIL**, those members of the privy-council in Great Britain who sit as a court of justice in the hearing of appeals, etc.: see **PRIVY-COUNCIL**. **JUDICIAL DECLARATION**, in Scotch law, declaration by one of the parties to a suit, who has been specially ordered by the court to be examined on a particular point. It is not a statement on oath. In other systems of law the same result is obtained by what are called admissions of the parties. **JUDICIAL FACTOR**, in Scotch law, person appointed by the court of session, on special application, as a guardian to protect the interests of minors, absent parties, and lunatics. In other systems corresponding officers are called receivers or trustees. **JUDICIAL RATIFICATION**, in Scotch law, declaration by a married woman in the absence of her husband, before a justice of the peace, to the effect that a disposition or deed of alienation of her heritable property has been made without coercion or fear on the part of her husband, and voluntarily on her part: it corresponds to acknowledgment of a deed by a married woman. **JUDICIAL REMIT**, in Scotch law, reference by a court or judge of a cause, or part of a cause (usually technical) to the decision of an arbiter or nominee, such as an engineer or accountant: it corresponds to a reference to an arbitrator or expert to report.—**SYN.** of 'judicious': wise; skilful; discerning; prudent; rational; sagacious; discreet; in *OE.*, judicial.

JUDICIAL SEPARATION, in Law: separation of two married persons by order of the proper court. Married persons may, if they please, mutually agree to live separate, and they may enter into a deed of separation for that purpose, which to some extent is recognized as valid by courts of equity: this is called voluntary separation. But, in the eye of the law, two married persons living apart are still married, and retain the status of married persons, and must sue and be sued in all respects the same as if they were still cohabiting. And a deed of separation is always revocable by the parties, though to some extent binding on each, if the other do not consent to renew the cohabitation.

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But when the parties have not mutually consented to separate, one of them can compel a J. S. for certain grounds of misconduct. Thus, either party may apply on the ground of adultery, or cruelty, or desertion without cause for two years and more. The kind of cruelty which has been held a ground of judicial separation is difficult of definition. The legal grounds of J. S. vary considerably in different states; but in most of the states are nearly the same as in England.

The consequences of a judicial separation are as follows: The parties, not being divorced, cannot marry again; but there is no longer the duty of cohabiting. Part of the decree may consist of an award of a certain income to the wife after separation, and the court may make orders as to the custody and maintenance of children. But, irrespective of this, the wife becomes, to all intents and purposes as regards her future property, in the same position as if she were unmarried. On the other hand, the husband is no longer responsible for maintaining his wife, except so far as he may have been ordered to pay her alimony, and he is not liable for her future debts.—See MARRIAGE: DIVORCE: HUSBAND AND WIFE.

JUDICIARY in the United States: including judges of various grades. The highest judicial body is the supreme court of the United States, established by the constitution and comprising a chief-justice, salary \$10,500 per annum, and 8 associate-justices, salary \$10,000 per annum each, all appointed by the pres., and subject to confirmation by the senate. These justices hold office during good behavior, and their salaries cannot be reduced during their incumbency. The chief-justice presides over the court when in full session, and the associate-justices take precedence (1) according to the date of their commissions, or (2) when two or more commissions bear the same date according to their age. In case of the death or inability of the chief-justice to perform his duties, the associate-justice first in precedence takes his place till a successor is appointed and confirmed. This court has jurisdiction over all cases in law and equity arising under the constitution, the laws of congress, and treaties with foreign countries; exclusive jurisdiction over all controversies of a civil nature where a state is a party (except as below), and over suits or proceedings against ambassadors or other public ministers consistent with the laws of nations, but not exclusive over suits brought by ambassadors or other public ministers; and original jurisdiction over civil controversies between a state and an alien. The supreme court holds one session annually beginning on the second Monday in Oct.; also such special terms as may be necessary. None of these judges are permitted to engage in other legal business, and on resigning after at least ten years' service and on attaining the age of 70 years, each one is paid the full salary of his office during the remainder of his life.—The United States is divided into 9 judicial circuits, to each one of which a member of the supreme court of the United States is assigned. In each circuit is a circuit court with one

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judge, salary \$6,000 per annum, who presides over the business of his court, and has the same power and jurisdiction as the justice of the supreme court allotted to the circuit. It is the duty of the chief-justice and of each associate-justice of the supreme court to attend at least one term of the circuit court to which he is assigned during every period of two years. The circuit courts have original jurisdiction in civil suits at common law or in equity where the matter in dispute exceeds in value \$500 exclusive of costs, and the United States is plaintiff or petitioner, or an alien is a party, or the suit is between a citizen of the state where the suit is brought and a citizen of another state; also in cases of violation of the copyright or patent laws; and have appellate jurisdiction by writs of error to the district courts or appeals from them.—The United States is further subdivided (1889) into 58 federal judicial districts, each one of which has a U. S. district court, with one judge appointed by the pres. and a resident of the district. The judge of the n. dist. of Cal. (San Francisco), receives a salary of \$5,000 per annum; e. dist. of La. (New Orleans), \$4,500; n. dist. of Ill. (Chicago), n., s., and e. dists. of N. Y. (Utica, New York, Brooklyn), Md., Mass., N. J., s. dist. of O. (Cincinnati), and e. dist. of Penn. (Philadelphia), \$4,000; all the others \$3,500. The district courts have civil and criminal jurisdiction, all the powers of courts of admiralty, and, since 1845, jurisdiction over contracts and torts regarding vessels plying between the various ports on the great lakes.—There is also a United States court of claims with a chief-justice, salary \$4,500 per annum, and 4 associate-justices, salary \$4,500 per annum each.—The federal judicial system extends also into the several territories, each one of which has a supreme court with a chief-justice and from 2 to 5 associate-justices, and three district courts presided over by the supreme court justices between supreme court terms. These judges also are appointed by the pres., hold office for four years unless sooner removed, and receive salaries of \$3,000 per annum each.—For the District of Columbia a special supreme court was provided 1863, comprising a chief-justice and 5 associate-justices. This court has the same jurisdiction as circuit and district courts, but action in them can only be taken against residents of the District or persons found therein, and any judge of the court may hold a criminal court for the trial of crimes and offenses arising in the District.

The various states in the Union have observed no uniformity in establishing their judicial systems, hence they differ widely in the names, numbers, and functions of their courts, and in the methods of selecting their judges. The usual courts are supreme, superior, circuit, oyer and terminer, appeals (or errors and appeals), chancery, orphans' (or surrogate's), general and special sessions, common-pleas, and municipal, district, police, and peace-justices' courts. Courts of common-pleas have original and general jurisdiction for the trial of issues of fact and law according to common-law principles. Judges are appointed by governors with or without the consent of the state senates, elected

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by legislatures in joint session, or elected by direct popular vote: they serve for terms of 2 to 14 years, or during good behavior. In some states they can be removed only by conviction on impeachment, when like the U. S. senate the state senate may sit as a court of impeachment; in others they may be removed by the gov. See CHANCERY: COMMON LAW: COMMON LAW, COURTS OF: COUNTY COURTS: LAW: JUDGE: COURTS OF LAW.

JUDITH, *jū'dith*: heroine of the apocryphal and fictitious book of J. (probably of B.C. 2d c.; Movers, Ewald, etc.); represented as a beautiful Jewess of Bethulia, who perils her life and chastity in the tent of Holofernes, general of Nebuchadnezzar, in order to save her native town, by the assassination of the Assyrian commander. This she achieves, and escapes with the head of Holofernes to Bethulia. Her townsmen are inspired with a sudden enthusiasm, rush out upon the enemy, and completely defeat them. The tale is not mentioned by Josephus; and has, from an early period, been held to be an allegory; but it seems probable that it is a legend founded on some fact. It has frequently furnished poets and painters with subjects.

JUDSON, *jūd'son*, ADONIRAM, D.D.: missionary: 1788, Aug. 9—1850, Apr. 12; b. Malden, Mass., where his father was pastor of the Congl. Church. He graduated at Brown Univ. 1807, and Andover Theol. Seminary 1810. While in the seminary he, with five other students, applied to the General Assoc. of Massachusetts (Congl.), seeking advice as to missionary labor among the heathen. This application led to the formation of the Am. Board of Commissioners for Foreign Missions. J. married (1) Ann Hasseltine (q.v.), and sailed for India as a missionary under the auspices of the London Missionary Soc. 1812. On the voyage he changed his views regarding baptism, and on reaching Calcutta he and his wife were baptized by immersion: this led to his withdrawal from the London Missionary Soc. and his subsequent identification with the Bapt. missionary work. Anxious to work in Burmah, he settled in Rangoon, learned the language, and wrote and spoke it afterward in preference to English. In 1814 the American Bapt. Missionary Union was established, and thenceforth his labors were under its auspices. He began preaching in public as soon as he had mastered the Burmese language, and early set himself about writing, translating, and publishing tracts and other religious documents for his native congregation. The accession to the throne of a zealous Buddhist king threatened to put a stop to christianizing work in the kingdom, and Dr. J. went to Ava to solicit from the king protection for the missionaries. In 1817 he completed the translation of the Gospel of Matthew into Burmese, and 1821 the Epistle to the Ephesians. Three years later he removed to Ava, and soon afterward the war between the English and the Burmese checked all missionary work, and caused the arrest and imprisonment of the leaders in it. He spent two years in prison, heavily chained and in daily expectation of being

JUDSON.

put to death. After the close of the war, he re-established the mission at Amherst, declined the office of interpreter to the English legation, began a series of missionary tours, and removed to Maulmain, the English capital. In 1833 he completed the translation of the Bible into Burmese and began revising the whole Scriptures. In 1834, Dr. J. married (2) Sarah Hale Boardman (q.v.). He then applied himself for six years to the preparation of a Burman grammar, Pali dictionary, Burman dictionary, and complete Burman Bible. He returned to the United States and married (3) Emily Chubbuck (q.v.) 1846, and the same year resumed his work in Maulmain. In 1849 he completed the first part of his Burman dictionary—Burmese into English and English into Burmese, and died before the second part was finished. His 25 years of labor in the Karen jungles were rewarded by the conversion of 20,000 people to Christianity. His whole missionary career extended nearly 40 years. He received the degree D.D. from Brown Univ. 1823. He was one of the most devoted and heroic, as well as one of the earliest, of American missionaries to heathen lands.

JUDSON, ANN HASSELTINE: first wife of Dr. Adoniram J.: 1789, Dec. 22—1826, Oct. 24; b. Bradford, Mass.: missionary. She was educated at Bradford Acad., became a teacher there, married Dr. J. 1812, Feb. 5, and accompanied him to his Indian missionary field. In 1822 she returned to the United States after visiting England, on account of impaired health; prepared a *History of the Burmese Mission*; addressed the Bapt. Gen. Convention in Washington on the condition and needs of the mission, and returned to India 1823. On arriving at Rangoon, she found that her husband and other missionaries had been imprisoned. After vainly seeking assistance for her husband and protection for herself and child from the native authorities, she also went to prison. After the close of the war she narrowly escaped death from spotted fever, accompanied Dr. J. to Amherst, translated the Gospel of Matthew and the Burmese catechism into Siamese, and aided in the compilation of a Burmese grammar.

JUDSON, EDWARD, D.D.: missionary: b. Maulmain, Burmah, 1844, Dec. 27; son of Adoniram and Sarah Boardman J. He graduated at Brown Univ. 1865, was appointed principal of the Townshend Seminary, Vt., became prof. of Latin and modern languages in Madison Univ. 1867, and was pastor of the N. Orange (N. J.) Bapt. Church 1875-81. In the latter year he resigned and began missionary labor in the lower part of New York, hoping to erect a large church building there as a memorial to his father. He succeeded in gathering a large congregation in the tenement-house district, and with gifts amounting to \$220,000 planned (1889) a building to comprise a church auditorium, spacious Sunday-school rooms, young men's lodging-house, children's home, kindergarten, and industrial and singing schools. He received the degree D.D. from Madison Univ. 1883.

JUDSON—JUGGLE.

JUD'SON, EMILY CHUBBUCK: 3d wife of Dr. Adoniram J.: 1817, Aug. 22—1854, June 1; b. Eaton, N. Y.: missionary. She was educated in the Utica female seminary, engaged in literary work 1841, attracted the friendship of Nathaniel P. Willis, and assumed the pen-name *Fanny Forrester*. She married Dr. J. 1846, June 2, resided in Amherst, India, till after her husband's death, and returning to the United States 1851 applied herself to the promotion of the cause of missions. Her publications include *Charles Linn* (1841), *The Great Secret* (1842), *Allan Lucas* (1843), *Alderbrook*, 2 vols. (1846), *Kathayan Slave* (1853), *My Two Sisters* (1854), *An Olio of Domestic Verses, Trippings in Author Land*, and *Memoir of Mrs. Sarah B. Judson*. She also gathered the material for Francis Wayland's life of her husband.

JUD'SON, SARAH HALL (BOARDMAN): 2d wife of Dr. Adoniram J.: 1803, Nov. 4—1845, Sep. 1; b. Alstead, N. H.: missionary. She married the Rev. George Dana Boardman 1825, July 4, accompanied him to the Bapt. mission in India, spent two years in Calcutta learning the Burmese language, engaged in missionary work in Amherst, Maulmain, and Tavoy, established a girl's school in the latter place, and after her husband's death (1831) became interested in the work in the Karen jungles. She married Dr. J. 1834, and aided him in his work at Maulmain till 1845, when her health became impaired. With her husband she then started for the United States, but died while in the harbor of James Town, St. Helena. She translated into Burmese a part of *Pilgrim's Progress*, her first husband's tract *Dying Father's Advice*, and numerous hymns.

JUG, n. *jüg* [a familiar personification forming an equivalent of *Joan*, *Jenny*, or *Jill*; Dan. *juggle*]: a vessel with a handle for holding drink, generally swelling out in the middle, and having a narrow mouth: V. to emit or pour forth the sound of *jug*, as the nightingale; to stew, as in a jug or a jar placed in boiling water. **JUG'GING**, imp. **JUGGED**, pp. *jügd*. **JUGGED HARE**, a hare cut into pieces and stewed with wine and other flavorings.

JUGA, n. plu. *jó'gǎ* [L. *jügum*, a yoke]: in *bot.*, a name given to the ribs on the fruit of the umbelliferæ. **JU'GATE**, a. *-gāt*, applied to the pairs of leaflets in compound leaves. **JUGUM**, n. *jó'güm*, a pair of leaflets—*unijugate*, one pair; *bijugate*, two pairs—and so on.

JUGATA, n. *jü-gǎ'ta* [L. *yoked*, *joined*; *capita*, heads, being understood]: in *numis.*, two heads represented on a medal or coin side by side or joining each other.

JUGGERNAUT, n. *jüg'gér-nawt* [Hind. *jagatnatha*, lord of the world]: famous idol among the Hindus: see **JAGGERNAUT**.

JUGGLE, n. *jüg'gl* [F. *jongleur*; OF. *jugleor*, a conjuror, a story-teller; F. *jongler*, to divert in any way, to juggle—from L. *joculārī*, to jest or joke—from *jocus*, sport, jest. It. *giocolare*, to juggle: Ger. *gaukeln*, to deceive by sleight

JUGGS—JUGULAR.

of hand]: an imposture; a deception; a trick: V. to deceive by trick or artifice; to play tricks by sleight of hand. JUG'GLING, imp.: ADJ. playing tricks by sleight of hand; deceiving: N. the act or practice of; deceit; trickery. JUG'GLED, pp. *jūg'gld*. JUG'GLER, n. *-glér*, one who deceives by sleight of hand; a cheat. JUGGLERY, n. *jūg'glér-ì*, sleight of hand; trickery; imposture. JUG'GLINGLY, ad. *-lì*.—The term *Juggler*, now almost synonymous with conjuror, and applied to persons who perform tricks of legerdemain, originally designated the professional musicians who attended the troubadours and trouvères of Provence and n. France, either singing their poems, or, if the poets themselves sang, then accompanying them with an instrument, which was reckoned beneath the dignity of the poet himself. These musicians soon began to be also kept in the service of kings and princes, whence they received the name *menestrels* or *minstrels* (Lat. *minister*, a servant). The profession was at this time honorable, and good endowments were devoted to the maintenance of minstrels; and when the art of the minstrel ceased to be exclusively employed for the entertainment of courts, those of this profession formed a separate guild in some towns, as in Paris. But it gradually lost respectability. Rope-dancers, and all who sought to gratify the populace by sleight of hand or feats of agility, were designated by the name *jongleur*, until it became restricted to its present acceptation. The ancient Romans had their conjurors or wonder-workers (*praestigiatōres*), their throwers of knives (*ventilatores*), and their players with balls and rings (*pīlariū*). But the greatest proficient in everything of this kind are and have for many ages been the Hindus and Chinese. Some of their feats are utterly amazing.

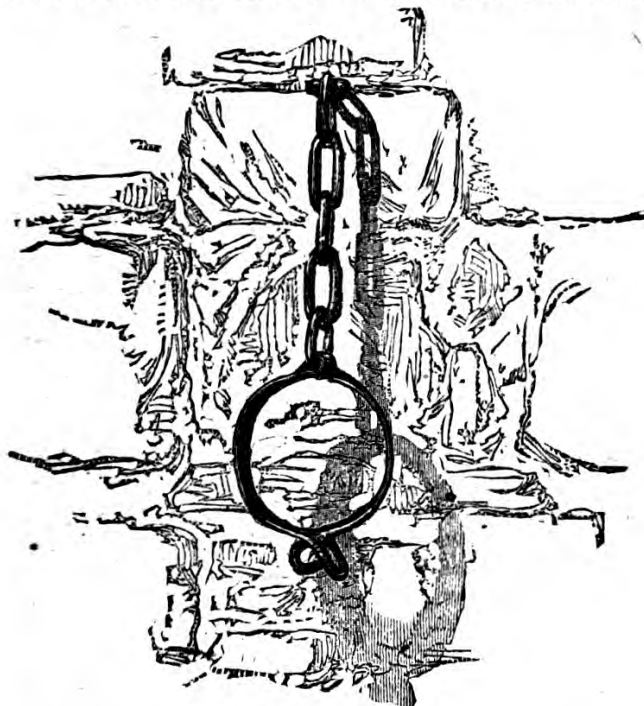
JUGGS, or JOUGS, n. plu. *jūgz*, sometimes JOGGS [F. *joug*, a yoke—from L. *jugum*, a yoke: Dut. *juk*, a yoke]: in *Scot.*, an old mode of punishment, being a form of pillory. It consists of a collar or ring opened by a hinge to inclose the culprit's neck, and could be secured with a staple or padlock; and it was fastened by a chain of three or four links to a pillar or wall in some public place, such as a market cross, a market trone or weighing post, a prison door, a church door, a churchyard gate, a churchyard tree, a tree beneath whose branches courts were held, and the like. The J. were employed as a punishment both for ecclesiastical and for civil offenses. They may be traced as far back as the 16th c., and though they have not been in use for the last hundred years, they are still seen hanging at a few country churches. They were used in Holland also, and probably in other countries. The accompanying cut represents the J. at the churchyard gate of the picturesque little hamlet of Duddingston, within about a mile of Edinburgh. The BRANKS (q.v.) were occasionally hung on the same pillar with the jugs.

JUG'LANDS AND JUGLANDA'CEÆ: see WALNUT.

JUGULAR, a. *jō'gū-lér* [F. *jugulaire*, jugular—from L. *jūg'ulūm*, the collar-bone, the neck]: pertaining to the neck or throat: N. the large vein of the neck.

JUGURTHA.

JUGURTHA, *jū-ger'tha*, King of Numidia: (reigned B.C. 118–106); d. B.C. 104; natural son of Mastanabal, who was son of King Masinissa. He was carefully educated with Adherbal and Hiempsal, sons of his uncle Micipsa who, with the two other sons of Masinissa, succeeded Masinissa on the throne. After Micipsa's death, J.—who had by Micipsa's will been joined with Micipsa's two sons, Adherbal and Hiempsal, in the government—soon caused Hiempsal to be murdered (B.C. 118); and Adherbal fled to Rome. J. succeeded in bribing great part of the Roman senate, and obtained a decision in his favor, freeing him from the charge of the murder of Hiempsal, and assigning him a larger share of the kingdom than was given to Adherbal B.C. 117. But J. soon invaded Adherbal's dominions; and notwith-



Jugs.

standing injunctions by the Romans to the contrary, besieged him in the town of Cirta B.C. 112, and caused him and the Romans who were captured with him to be put to death with horrible tortures. Hereupon, war was declared against J. by the Roman people; but, by bribing the generals, J. contrived for years to baffle the Roman power. At last the consul, Q. Cæcilius Metellus, proving inaccessible to bribes, defeated him B.C. 109, 108, so that he was compelled to flee to the Mauritanian king, Bocchus. Marius, who succeeded Metellus in the command, carried on the war against J. and Bocchus, till at last Bocchus delivered up J. to the Romans, who exhibited him at Rome in the triumph of Marius B.C. 104, and then threw into prison to die of hunger. J. has obtained greater prominence in history than he deserves, on account of Sallust's history of the Roman campaigns against him.

JUICE—JUKE.

JUICE, n. *jūs* [F. *jus*, broth, juice—from L. *jus*, broth, soup—akin to Skr. *yushas*, a liquid, juice: Sp. *jugo*, the juice of plants]: the sap of vegetables; the fluid part of animal substances. **JUICELESS**, a. *-lēś*, deprived of juice; without moisture. **JUICY**, a. *jō'si*, abounding with juice; moist; succulent. **JUICINESS**, n. *-sī-nēs*, state of abounding with juice.—**SYN.** of 'juice': sap; fluid; humor; liquor.

JUJUBE, *jō'júb* [F. *jujube*, a jujube—from L. *zizyphum*; Gr. *zizūphon*: Ar. *zifzuf*, the jujube-tree], (*Zizyphus*): genus of spiny and deciduous shrubs and small trees of nat. ord. *Rhamnaceæ*. The species are numerous. The **COMMON J.** (*Z. vulgaris*) of s. Europe, Syria, etc., is a low tree, which produces a fruit resembling an olive in shape and size, red, or sometimes yellow when ripe. The fruit is dried as a sweetmeat, and forms an article of commerce. *Syrup of Jujubes* is used in coughs, fevers, etc.; but the *J. paste* or *Pâte de J.*, of the shops is made of gum arabic and sugar, without any of the dried jelly of this fruit. The *J.* of India (*Z. Jujuba*) is a similar small tree, with round or oblong fruit, sometimes of the size of a hen's egg.—A Chinese species of *J.* (*Z. nitida*), has a very pleasant yellow fruit about an inch long; and other species not much inferior are found in Africa, S. America, and other warm countries.—The **LOTUS** (*Z. Lotus*), a shrub two or three ft. high, native of Persia, n. Africa, etc., produces in great abundance a fruit about as large as a sloe, and with a large stone, but having a sweet farinaceous pulp, which the natives of parts of Africa make into cakes resembling gingerbread. A kind of wine is sometimes made from it.—*Z. Spina Christi*, another native of the countries near the Mediterranean, is sometimes said to be the plant from the branches of which our Savior's crown of thorns was made, and is therefore called **CHRIST'S THORN** and **JEWS' THORN**, names which, for the same reason, are given also to *Paliurus aculeatus*. The fruit is about the size of a sloe, oblong, and pleasantly acidulous.

JUJUY, *chó chwē'*: province of the Argentine republic, bounded n. and w. by Bolivia, e. by the Gran Chaco, s. by Salta; abt. 35,000 sq. m. The surface is well watered, and the soil is very fertile and covered with a most luxuriant vegetation. Though mostly comprised within the tropics, the climate is mild and salubrious. The province has enormous mineral wealth in gold, silver, copper, iron, and quicksilver, but no mines are yet worked. Pop. abt. 40,000.

JUJUY: town of the Argentine Confederation, S. America, on the river and in the province of J., about 870 m. n.w. of Buenos Ayres. It is on the main trading route from Salta across the mountains into Bolivia. Pop. abt. 8,000.

JUKE, v. *júk* [OF. *juc*, a roost or perch; F. *jucher*, to roost, as a bird: Scot. *jouk*, to incline the head or body as in an act of obeisance]: to perch or roost, as birds generally do; to incline or bend the head: N. the neck of a bird. **JUK'ING**, imp. **JUKED**, pp. *júkt*.

JULEP—JULIAN.

JULEP, n. *jól'lep*, or **JU'LAP**, n. *-láp* [F. *julep*—from Sp. *julepe*, *julep*—from Pers. *julab*—from *gulap*, rose-water, also *julep*: mod. Gr. *zoulō*, I squeeze out juice; *zouālpōn*, a drink composed of juices]: a mixture of water and sugar, etc., to serve as a vehicle for taking medicine; a beverage composed of brandy or whisky, or the like, with sugar and pounded ice, and flavored with mint; also called *mint-julep*.

JULIA, *jól'ya* or *jū'li-a*: B.C. 39—A.D. 14; only child of the Roman emperor Augustus, being his daughter by his second wife, Scribonia. She was only a few days old when her mother was divorced. She was educated with great strictness; was distinguished for beauty, talents, accomplishments, and agreeable manners; and was married at a very early age B.C. 25, to her cousin, Marcus Claudius Marcellus, son of the sister of Augustus. After his death she was again married, when little more than 17 years of age, to Marcus Vipsanius Agrippa, to whom she bore three sons and two daughters. He died B.C. 12; and J. was given in marriage, B.C. 11, to Tiberius; his mother, Livia, step-mother of J., persuading Augustus to this, in order to secure the succession of Tiberius to the throne. The marriage was an unhappy one, and the conduct of J. far from irreproachable; but Livia's hatred induced her to make exaggerated accusations to Augustus, and she so wrought upon his mind, that he astonished all Rome by suddenly declaring B.C. 2, that his daughter had so far forgotten herself as to be guilty of the most shameless adulteries, making even the Forum the scene of her nightly vice. In this charge there seems to have been too much truth; but it is doubtful if there was any truth in the further allegation that J. and her paramours had entered into a conspiracy against the life of the emperor. J. was banished to the isle of Pandataria (now Ventotiene), near Naples, and a number of persons of high rank were put to death or banished for their alleged participation in her guilt. From Pandataria, whither her mother, Scribonia, accompanied her, she was removed to Rhegium (now Reggio), where she was allowed by Tiberius to remain destitute even of common comforts, till her death. Her son, Agrippa, was put to death by Tiberius A.D. 14, shortly before the death of his mother. Her other sons died in early age. Her daughters survived her. The elder daughter, Julia, died A.D. 28, in the isle of Trimetus, on the coast of Apulia, whither she had been banished by Augustus 20 years before for adultery. The younger, the virtuous Agrippina (q.v.) died A.D. 33, in Pandataria, to which she had been banished by Tiberius.

JULIAN, a. *jū'yan* or *jū'li-an* [after *Julius* Cæsar]: denoting the system of computing time, as regulated by Julius Cæsar, in use in Great Britain till 1752, when it was superseded by legal enactment by the Gregorian, established by Pope Gregory XIII. 1582. **JULIAN YEAR**, 365 days, 6 hours—but see **YEAR** (see also **CALENDAR**). **JULIAN EPOCH**, see **CHRONOLOGY**.

JULIAN, commonly called *the Apostate*, on account of his renunciation of Christianity (full name, **FLAVIUS**

JULIAN.

CLAUDIUS JULIANUS), Roman Emperor: 331 Nov. 17—363, June 26 (reigned 361–363); b. Constantinople, son of Julius Constantius, brother of Constantine the Great. He and his brother Gallus, who were too young to be dangerous, were spared when Constantius II., son of Constantine, massacred the rest of the imperial family. They were, however, removed to a castle in Cappadocia, where they were subjected to rigorous espionage. J.'s life was very miserable; his nearest kindred had been largely sacrificed to the ambition and jealousy of the new imperial professors of Christianity; and the monkish education which he received produced a strong detestation of the religion professed by his tormentors. He was fond of literature and speculation, and he instinctively turned away from the rude asceticism, gloomy piety, and barbarous janglings of *Homooousians* and *Homoiousians*, to the gayety, artistic taste, and intellectual meditateness of the old Greek philosophers. He idealized the old Hellenic world, and with it its philosophic paganism, not noticing how greatly it had been modified by the penetrating ethical power of the Christianity which it rejected. Some of his teachers appear to have been (secretly) pagans, for the sudden change in the state religion brought about by Constantine had necessitated much hypocrisy, especially among scholars and government officials. At the age of 20, J. was at heart a disbeliever in the divine origin of Christianity. On the death of his brother Gallus, he was removed by Constantius to Milan, but was subsequently allowed to go to Athens, the home of Greek learning, where he gave himself up to philosophical pursuits, and to the enjoyment of cultivated society. The emperor—though still jealous and suspicious—now conferred on him the title of Cæsar, and sent him to Gaul to protect it from the incursions of the Germans. J. defeated the Alemanni at Strasburg 357, and compelled the Franks to make peace. His internal administration in Gaul was mild and judicious. His popularity, in consequence, became very great, and when Constantius ordered him to set out for the East, J.'s soldiers rose in insurrection, and proclaimed him emperor, offering him the alternative of acceptance or of instant death. He reluctantly acceded to their demands. The death of Constantius at Mopsocrene, in Cilicia, 361, Nov. 3, removed the only obstacle out of his way; and Dec. 11 he made a triumphal entrance into Constantinople. He now publicly avowed himself a pagan, but surprised both Christians and pagans by his edict of toleration. Yet he was not impartial, for he chose most of his officers from the professed followers of the old religion, and compelled the Christian soldiers to at least a seeming of worship of the pagan gods, and to contribute to the restoration of the heathen temples. In 362 he made great preparations at Antioch, in the hope of bringing the war with the Persians to a successful termination; and in the following year advanced to Ctesiphon and across the Tigris, but treachery and lack of provisions necessitated his retreat. He was followed and attacked by the enemy, who were repeatedly repulsed, but in one of the engagements he was mortally wounded by an

JULIAN—JULIEN.

arrow.—J. was both a great monarch and a great man. His rule, compared with that of many of the so-called Christian emperors, was just, liberal, and humane; and though only 32 years of age when he perished, he had composed a great number of orations, letters, satires, and even poems (collected and published by Spanheim 1696). Among his lost works are his *Refutation of the Christian Religion*, and *Memoirs of his German Campaigns*, and his *Diary*. J. appears to have been more attached to philosophy than religion, and to have more readily apprehended as truth what commended itself to the intellect, than what spoke to the heart. In literature he inclined to pedantry; and it has been observed that he lacked the manly Roman composure and the unconscious Greek spontaneity.—See Neander, *Über den Kaiser Julian*; Strauss, *Der Romantiker auf dem Throne der Cäsaren*; also the works of Mangold, Semisch, and Rode (1877) on Julian.

JULIAN, GEORGE WASHINGTON: statesman: b. Centreville, Ind., 1817, May 5. He received a common-school education, was admitted to the bar 1840, elected member of the legislature 1845, delegate to the free-soil convention at Buffalo 1848, representative in congress 1849, Dec. 3—1851, Mar. 3; delegate to the first national republican convention 1856, representative in congress 1860–70, and chairman of the committee on public lands 8 years, and member of the committees on the conduct of the war and on reconstruction. He joined the liberal republican party 1872, and since that time has been an ardent democrat. He was appointed surveyor-gen. of New Mexico 1885, has strongly supported female suffrage, and published numerous articles on political and reformatory measures.

JULIAN CROSS, or CROSS OF ST. JULIAN: in *heraldry*, a cross crosslet placed saltire-ways.

JÜLICH, *yü'lich* (French JULIERS): town of Rhenish Prussia, 16 m. n.e. from Aix-la-Chapelle, on the Roer. J. is situated in a fertile plain, but surrounded by marshes, which make it very unhealthy. It is said to be of Roman origin, and was strongly fortified till 1860, when the fortifications were demolished. The principal industry is the manufacture of leather.—J. was long the cap. of an independent duchy; and J. and Berg (q.v.) were united as possessions of the same family. On the death of the Duke of J. 1609, began a dispute as to the succession, which was not settled till 1666, when a decision was given in favor of the House of Pfalz-Neuburg—the Elector of Brandenburg obtaining Cleves and some of the other territories formerly united with J. and Berg. The Pfalz-Neuburg family becoming extinct 1742, J. passed to the Pfalz-Salzbach branch, afterward electors of Bavaria. By the peace of Luneville it was annexed to France as part of the dept. of Roer; and 1814 was assigned to Prussia by the Congress of Vienna. Pop. (1880) 5,295.

JULIEN, *zhü-le-äng'*, STANISLAS-AIGNAN (originally NOEL): first Chinese scholar of his age in Europe: 1797, Apr. 13—1873, Feb. 20; b. Orleans, France. In 1823 he

JULIERS—JULIUS II.

became a pupil of Abel Rémusat, who had recently been appointed to deliver a course of lectures on Chinese. In less than a year J. had made himself master of the principal difficulties of the language, and actually executed (in Latin) a translation of the great Chinese philosopher, Mencius, published at the expense of the Asiatic Soc. of Paris, and pronounced faultless. From that time his labors were directed chiefly to the languages and literature of the far East. Ancient and modern Chinese, Mantchu, Sanskrit, the Mongolian tongues, were familiar to him; and he is said to have known also almost all the European languages. His translations (into French) embrace the most important works in all departments of Chinese literature. He has given specimens of the Chinese drama in his *Hoei-lan ki* (The Circle of Chalk, 1832) and his *Tchao-chi-koueul* (The Chinese Orphan, 1834); of Chinese romances, by his *White and Blue, or the Two Snake Fairies* (1834), and several other pieces in *Salmigondis* and the *Constitutionnel*. J. was also the first who succeeded in translating Chinese poetry well—the constant use of allegory, and allusion to facts not known to Europeans, rendering it nearly unintelligible. But more valuable still than those purely literary productions are his translations of the great works that enable us to understand the religion and philosophy of the Chinese, such as the *Book of Rewards and Punishments* (1835), in which are contained the doctrines of Tao-sse, the *Book of the Way and of Virtue* (1841) by Lao-tseu, written B.C. 6th c., and forming the oldest and most illustrious monument of Chinese philosophy; and above all, the history of the *Life and Travels of Hiouen-Tsang* (1852), a work of immense importance for the earlier history and geography of India, and the knowledge of Buddhism. J. wrote various treatises concerning the industry and arts of the Chinese; e.g. *Summary of the Principal Chinese Treatises on the Culture of Mulberry Trees and Silk-Worms* (1837), and *Treatise on the Art of Manufacturing Porcelain* (1856). In 1869 he published the first part of the *Syntax of the Chinese Language*. On the death of Rémusat he became his successor at the Collège de France, and in 1855 pres. of the college. He was also conservator of the Bibliothèque Impériale, and was specially charged with the oversight of the Chinese department.

JULIERS': see JULICH.

JUL'INDER DOAB': see JULLUNDER.

JULIUS, *jūl'yūs*, II. (originally Cardinal Giuliano Della Rovere), Pope of Rome. 1443–1513, Feb. 22 (pope 1503–13); b. Albizzola, near Savona; nephew of Sixtus IV. He vehemently opposed during his cardinalate the designs of Alexander VI. for the aggrandizement of his family, and one of his earliest measures on his election to the pontificate was to resume possession of the duchy of the Romagna, which had been bestowed on Caesar Borgia. J. was beyond all suspicion of nepotism or selfish designs of aggrandizement; but his public career during his pontificate was almost entirely devoted to political and military enterprises for the

JULIUS III.—JULUS.

complete re-establishment of the papal sovereignty in its ancient territory—Bologna, Ferrara, etc., and for the extinction of foreign domination and foreign influence in Italy. In pursuing his designs, for the purpose of compelling from the republic of Venice the restitution of the papal provinces on the Adriatic, J. not only entered into the league of Cambray with Emperor Maximilian and Louis XII. of France, but had recourse to spiritual arms, by placing the republic under the ban of the church; and on the submission of Venice, apprehending the ambitious designs of Louis, he withdrew from the league, and entered into an opposite alliance, the 'Holy League,' to which Spain, England, and Switzerland were parties. Hence arose his bitter quarrel with Louis XII., in which the latter attempted, but ineffectually, to enlist the sympathies of the church against the pope. The Council of Pisa convened under Louis's influence was an utter failure; and the opposing council, fifth of the Lateran, assembled by J., but not brought to a close during his lifetime, completely frustrated the designs of Louis. It is alleged that, in his hatred of France, J. was desirous of drawing even the Turks into the league; but this allegation is negatived by his entire career, one of the main features of which was a design for a holy war, in which he himself should take the command. As an ecclesiastical ruler J. has little to recommend him. As a political sovereign he is described by Ranke as 'a noble soul, full of lofty plans for the glory and weal of Italy;' and Prof. Leo considers him, with all his defects, one of the noblest characters of that age in Italy. He was a liberal and judicious patron of art, and a friend of the rising literature of the time.

JULIUS III. (originally Cardinal Gian Maria del Monte), Pope of Rome: 1487–1555, Mar. 23 (pope 1550–55); b. Monte San Savino, near Arezzo. He was one of the four legates of the pope under whom the Council of Trent was opened; and after his election to the papacy 1550, he himself re-opened (1551) that council, which had been suspended more than two years. He is connected with English history as having sent Cardinal Pole to organize with Mary the reunion of the kingdom with Rome; but his general government of the church is marked by no very striking events, and his private character is sullied by the taint of nepotism.

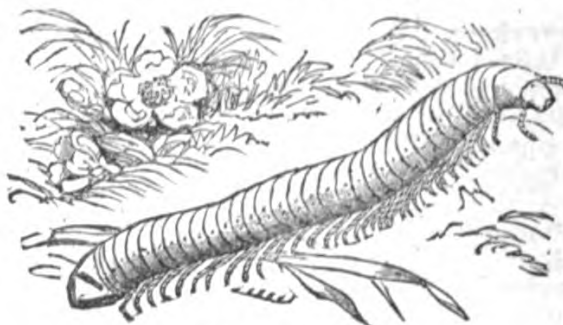
JULIUS CÆSAR: see CÆSAR, CAIUS JULIUS.

JULLUNDER, *jūl'ūn-dēr*, or **JALLANDAR**, *jūl'lan-dēr*: city of the Punjab, in the Doab of the same name between the Sutlej and the Beas; lat. 31° 21' n., and long. 75° 31' e. The soil of the neighborhood is very productive; and the place, though fallen from its former greatness, had (1881) 52,119 inhabitants.—J. gives name to an administrative district of 1,322 sq. m. (pop. 789,555); also to a division of 12,571 sq. m. (pop. 2,421,781).

JULUS, *jū'lūs*, or **IULUS**, *i-ū'lūs*: genus of *Myriapoda* (q.v.), of the order *Chilognatha*. The whole of this order was included in the Linnæan genus J., and it is still the

JULY—JUMILLAH.

family *Julidae* of many naturalists. The genus *J.*, as now restricted, contains many species. They are called sometimes SNAKE MILLIPEDES and GALLY-WORMS. They resemble centipedes in form; but their feet are more numerous—some having 120 pair—and are so weak that the animal seems to glide along on its belly, the feet moving



Julus Terrestris.

like a wavy fringe on each side. The body is nearly cylindrical, not flattened. On any alarm, the animal rolls itself up in a coil. The *Juli* have no poison-fangs, like centipedes. They inhabit moist and dark places, and feed chiefly on decaying vegetable substances, sometimes also on decaying animal substances.

JULY, n. *jó-lí* [after *Julius* Caesar, born in this month]: seventh month of the year in our calendar, fifth in the Roman calendar, where it was called Quintilis (the fifth). Originally, it contained 36 days, but was reduced by Romulus to 31, by Numa to 30, but was restored to 31 days by Julius Caesar, in whose honor it was named. By the Anglo-Saxons it was called *Maed-monath*, or mead-month, and *lítha-aeftera*, or after-mild-month.

JULY-FLOWER, *jó-lí*: a corruption of *gillyflower*, a plant of many species, very common: see GILLYFLOWER

JUMART, n. *jó-márt* [F. *jumart*, a probable corruption of L. *chimæra*, a fabled monster]: the supposed offspring of a bull, and mare or she-ass.

JUMBLE, v. *jüm'bl* [OE. *jombre*, to jumble; a frequentative of Eng. *jump*: Fris. *shumpeln*, to shake, as a wagon on a rough road]: to mix in a confused mass; to put together without order: N. a confused mixture; a collection without order. JUM'BLING, imp. JUM'BLed, pp. -bld: ADJ mixed in a confused mass. JUM'BLINGLY, ad. -lí. JUMBLES, n. plu. *jüm'blz*, small sweet cakes made of a mixture of flour, sugar, butter, and eggs.

JUMUSER, *jum-bó-sēr'*: town of British India, presidency of Bombay, in the dist of Broach, 22 m. n.w. of the town of Broach. The people are employed in the cotton, grain, and coarse cloth trade. Pop. 15,000.

JUMILLAH, *chó-mēl'yá*: handsome town of Spain, in the modern province of Murcia, in a delightful valley 35 m. n. of the city of Murcia. The people manufacture firearms, earthenware, and tiles. Pop. 7,400

JUMNA—JUMP.

JUMNA, *jŭm'ná*, or **JAMUNÁ**, *yá mó'ná*: river, principal feeder of the Ganges; perhaps the only Indian river of the first class which has its course wholly in Hindustan—the Indus, Sutlej, Ganges, and Brahmaputra all rising in Tibet. Its source, 10,849 ft. above the sea, is in lat. 31° n., and long. 78° 32' e., at the s.w. base of the Jumnotri Peaks; and, after flowing 875 m. chiefly s.e., it joins the Ganges at Allahabad. After its first 100 m., during which it receives many affluents, of which the Touse is the largest, it enters the plain of Hindustan, lat. 30° 20' n., and long. 77° 38' e., having still an altitude of 1,276 ft. above the sea. Below this point, it is joined by many considerable streams: the Chumbul, the Sind, the Betwa, and the Cane on the right; and the Hindon, the Seengoor, and the Rind on the left. All the way downward, the J. is generally shallow, and excepting as to descending rafts, unfit for navigation. By artificial means, however, its waters have been rendered doubly available both for commerce and for agriculture. From either bank, a canal has been drawn at once for the use of inland craft and for the purposes of irrigation. The one on the right side, begun 1356, leaves the main channel a short distance below the point of its emerging from the mountains; while the one on the left side, begun 1824, takes its departure a little further down, near the village of Fyzabad. Both rejoin the parent stream at Delhi. Historically and politically, the J. occupies a more prominent position than the Ganges itself above their junction. The former was necessarily the first to be crossed by the path of every invader from the n.w.; hence on it were built both Agra and Delhi, the two capitals of the Mussulman conquerors of India.

JUMNOTRI, *jŭm-nō'trē*: hot springs near the source of the Jumna, lat. 30° 59' n., and long. 78° 35' e., 10,849 ft. above the sea. Their temperature is 104°·7 F., nearly that of boiling water at their elevation. They are overhung by three connected mountains known as the Jumnotri Peaks, whose altitudes respectively are 21,155, 20,916, and 20,122 ft.

JUMP, n. *jŭmp* [prov. Sw. *gumpa*, to spring, to jump; *guppa*, to rock: Bav. *gumpen*, to jolt, to jump; *gumper*, the plunger of a pump: Lang. *ghimba*, to jump, to kick: Icel. *goppa*, to skip]: a leap; a spring; a bound; the space so passed over: V. to spring upward or forward, generally both; to pass to or over by a leap; in *OE.*, to agree; to coincide; to tally; to hazard; to risk rashly. **JUMP'ING**, imp.: N. the act of leaping or springing. **JUMPED**, pp. *jŭmpt*. **JUMP'ER**, n. *-ér*, one who jumps; one of a certain religious sect (see **JUMPERS**): *provincially*, a pervert or convert from Rom. Catholicism to Protestantism; a long iron punch, with steel chisel-point, used for boring rocks before blasting; the maggot of the cheese-fly. **JUMPING-JACK**, the toy figure of a man whose limbs are made to move nimbly by jerking a string. To **JUMP TO A CONCLUSION**, to decide without thought.

JUMP, ad. *jŭmp* [see **JUMP 1**]: in *OE.*, exactly; nicely; pat—from the *OE.* sense of **JUMP**, v. to agree; to tally.

JUMPERS—JUNCEÆ.

JUMPERS, *jūmp'ērz*: name originally applied to participants in some Welsh religious meetings, because after the sermon and singing of a hymn they indulged in leaping and dancing after the example, as they said, of David. In the middle ages the same feature of worship was observed, and the participants were known as dancers. John Wesley found many J. in Wales, and some writers claim the exercise to have been merely a bodily manifestation excited by the fervency of Methodist preaching. American Shakers are said to have indulged in leaping in religious meetings at one time, but now confine themselves to a swaying of the body.

JUMP'ING HARE (*Pedetes* or *Helamys Capensis*): South African rodent, *Spring Haas* of the Dutch colonists, generally placed near the jerboas in systems of zoology, but considerably differing from them. The head much resembles that of a hare, though the ears are shorter; the form of the body also is like that of a hare, but the hind-legs are very long and strong, like those of a kangaroo, and the toes both of fore and hind feet are armed with great claws. Its



Jumping Hare (*Helamys Capensis*).

powers of leaping are extraordinary; it clears 20 or 30 ft. at a bound. Night is its time of activity, and it makes mischievous inroads on fields and gardens. Its flesh is eaten.

JUNCATE, n. *jūng'kāt*: the correct spelling of **JUNKET**, which see.

JUNCEÆ, *jūn'sē-ē* or **JUNCACEÆ**, *jūn-kā'sē-ē*: natural order of endogenous plants, herbaceous, generally perennial, with creeping root-stock; narrow, often fistula leaves; regular flowers; the perianth 6-partite; the stamens six; the fruit a 3-valved capsule. This order is nearly allied to *Liliaceæ*, notwithstanding very great difference of aspect; for rushes (*Juncus*) are the best known examples of it. The species, about 200 in number, are natives mostly of cold and temperate climates.

JUNCITES—JUNG.

JUNCITES, n. plu. *jŭn'sīts* [L. *juncus*, a rush]: in *geol.*, fossil stems and leaves apparently related to the JUNCACEÆ, *jŭn-kā sē-ē*, or rush family.

JUNCTION, n. *jŭngk'shŭn* [L. *junctus*, joined, united; *junctiōnem*, a joining: F. *jonction*]: the act or operation of joining; union; place or point of union. **JUNCTURE**, n. *-tŭr* [L. *junctŭrā*, a joint]: a seam; a joint; the line or place at which two bodies join; a critical or important point of time.

JUNCTION CITY: city, cap. of Davis co., Kan.; at the junction of the Smoky Hill and Republican rivers which form the Kansas river; on the Union and Mo. Pacific railroads; 62 m. n.w. of Emporia, 71 m. w. of Topeka. It is the business centre of a large territory, has excellent water-power, extensive quarries of magnesian limestone, several flour-mills, carriage and agricultural implement factories, U. S. land office, 1 national bank (cap. \$50,000), 1 state bank, several churches and schools, and 2 newspapers. Pop. (1870) 2,778; (1880) 2,684; (1885) 3,555.

JUNE, n. *jŏn* [L. *jŭniŭs*, June—from the anc. goddess *Juno*: F. *juin*]: sixth month of the year in our calendar, but the fourth among the Romans. It consisted originally of 26 days, to which four were added by Romulus; then one taken away by Numa, and the month was again lengthened to 30 days by Julius Cæsar, since whose time no variation has taken place. The Anglo-Saxons called this month *sear-monath*, or dry-month, and *midsummer-monath*.

JUNE'-BERRY: small tree or shrub, abundant in the United States and Canada, bearing various names in different localities, ranging from 3 to 30 ft. high, having early, white, and profuse flowers, and yielding a sweet, purple fruit as large as a currant or pea. The dwarf variety, known as the mountain whortleberry, is cultivated in some of the w. states for its fruit, and all forms of the species are popular for garden ornamentation.

JUNG, *yŭng*, **JOHANN HEINRICH**, generally called **HEINRICH STILLING** or **JUNG STILLING**: author, 'charcoal-burner, tailor, village schoolmaster, oculist, professor of physical science, and mystic': 1740—Sep. 12—1817, Apr. 2; b. of poor parents at Imgrund, in Nassau. After trying various occupations, he became a student of medicine at Strasburg, where he lived in intimacy with Goethe, who conceived a great liking for him, on account of his simple, pure, affectionate nature. J. settled as a medical practitioner at Elberfeld, and distinguished himself as an operator for cataract. He is said to have improved the eyesight of more than 2,000 persons. He subsequently held professorships of economical and financial science at Marburg and Heidelberg. He died at Carlsruhe. His first publication was an autobiography, *H. Stilling's Jugend, Jünglingsjahre, Wanderschaft, Lehrjahre, Häusliches Leben und Alter* (3 vols. Berlin, 1777-8), which attracted much attention, and was followed by other publications continuing the history of the author's career. In religion, J. represents the *pietistic rationalists*, men who put little stress on the Scrip-

JUNGERMANNIA—JUNGLE-FOWL.

tures, but are full of veneration (sometimes a sentimental enthusiasm) for the spiritual truths of Christianity. J. was a fervent believer in the receiving of direct answers to prayer, and recounted many instances of it in his own experience. He was modest, and gentle—so kind, indeed, that he hated nothing except 'sects,' which, he maintained, were merely developments of pride.

JUNGERMANNIA, *jüng-ger-männ'a*: a Linnæan genus of cryptogamous plants, containing a great number of species, which some modern botanists have divided into many genera, and some have even formed into an order, *Jungermanniaceæ*, though it is generally regarded as constituting a sub-order of *Hepaticæ* (q.v.). The distinctive characters of the sub-order are that the *spore-cases* open by four valves, and that the *spores* are mixed with *elaters*. The species much resemble mosses in appearance; some are very common in moist places. The tropical species are very numerous, and some of them are to be found even on the young shoots and leaves of plants.

JUNGFRAU, *yüng'frow* (the Maiden): one of the highest mountains of the Bernese Alps; on the boundary-line between the cantons of Bern and Valais; height, 13,720 ft. It received its name either from the unsullied purity and dazzling brightness of the snow by which it is covered, or from the fact that no traveller had ever reached its highest point. Its summit was reached first by two Swiss gentlemen, named Meyer, 1811; and since by Agassiz, Prof. Forbes, and many others.

JUNG, Sir **SALAR**: also, **JUNG BAHADUR**, *jüng ba-há'dúr*: see **JANG**.

JUNGLE, n. *jüng'gl* [Hind. *jungál*, desert, forest: Skr. *jangala*, dry, desert]: in *India*, densely wooded land; the uncleared country; waste land. **JUNGLY**, a. *jüng'glí*, abounding with jungles.—*Jungle* is now fully adopted into the English language, to designate those thickets of trees, shrubs, and reeds, which abound in many parts of India, particularly in the unhealthy tract called Terai or Tarai, along the s. base of the Himalaya; and in the Sunderbunds (q.v.) at the mouth of the Ganges. The jungles are often impassable, from the thick growth of underwood, tall grasses, and climbing plants. The soil is generally swampy, and fever and other diseases abound. Tigers, and other beasts of prey, elephants, boars, deer, and other quadrupeds are found in great numbers in these thickets, with gigantic snakes, and multitudes of monkeys. The jungle flora and fauna are very peculiar, and the moisture and heat carry a tropical vegetation beyond its usual limits northward to the lower valleys of the Himalaya.

JUNGLE-FOWL, *jüng'gl-fowl*, OF AUSTRALIA: bird (*Megapodius tumulus*) which has been called also the **MEGAPODE**; totally different from the jungle-fowl of India: see **FOWL**. It belongs to the family *Megapodidæ*. All the species are large birds, with short wings and tail, and of slow, heavy flight. They are remarkable for thickness of

JUNGLY GAU—JUNIPER.

legs (*tarsi*), and long and thick toes; and for their habit of heaping up mounds of earth, decayed leaves, etc., in which they lay their eggs, which are hatched by the heat produced by fermentation. The Australian J. makes heaps sometimes 15 ft. high, and 60 ft. in circumference at the base, under the shade of thick trees or shrubs, where the heat of the sun may not evaporate the moisture. In these heaps, it makes holes of several ft. in depth, in which to deposit its eggs. How the young birds emerge, is not known, nor whether they are assisted by the parent birds. The mounds of the J. were at first supposed to be sepulchral tumuli. The J. is mostly of brownish color. Its size is rather less than that of the common domestic fowl. The propensity to heap up earth is very early manifested by the young birds.

JUNGLY GAU, *jǔng'glǐ gow* (*Bos Sylhetanus*): species of ox, inhabiting Sylhet and other mountainous parts of n.e. India. It is nearly allied to the Gayal (q.v.) and to the common ox, and has more the appearance of some of the European domesticated breeds of ox than any of the other wild oxen of Asia. The J. G., although in a wild state it is seen only in places remote from the habitation of man, is easily domesticated. Its milk is very abundant, and of excellent quality.

JUNIATA, *jū-nǎ-át'a*, RIVER: picturesque, non-navigable stream in Penn., formed by the Little Juniata and Frankstown branch near Altoona, 1,150 ft. above the sea, flowing about 150 m., generally e., among hills whose summits are 800 to 1,500 ft. above the river, and emptying into the Susquehanna river at Duncannon, 14 m. n. of Harrisburg, and 345 ft. above the sea. Its principal affluent, the Raystown branch, is equally beautiful and tortuous. The Penn. railroad and the old Penn. canal follow its course, the former crossing it several times.

JUNIOR, a. *jūn'yér* [L. *jūnior*, younger—from *juvēnis*, young]: younger; not so aged: N. one who is younger than another. JUN'IOR'ITY, n. *-yǒr'í-tǐ*, the state of being younger. JUN'IORSHIP, n. the state of being junior. JUN'IOR OPTIME, *ǒp'ti-mě* [L. *optimus*, best—*lit.*, junior in the highest rank or division]: in *University of Cambridge*, a third-class-honor man in the mathematical examination.

JUNIPER, n. *jō'nǐ-pér* [L. *juniperūs*, the juniper-tree—said to be from L. *juvēnis*, young; *parērē*, to produce: It. *ginepro*]: genus of trees and shrubs of nat. ord. *Coniferae*, sub-ord. *Cupressineae*, having unisexual flowers, the male and female generally on separate plants, and the fruit a fleshy *galbule* (popularly a *berry*), containing three small nuts. The species all are evergreen, and have small, narrow, rigid leaves, which are opposite, or in whorls of three or four, or imbricated in four rows. They are natives chiefly of temperate and cold regions in Europe, Asia, Africa, and America.—The COMMON J. (*J. communis*) is found in all parts of Europe, and n. Asia, and in the n. parts of N. America. Only in favorable circumstances does it become a tree of 15, 20, or at most 30 ft. in height:

JUNIPER.

in general it is only a shrub 2 to 6 ft. high. The fruit takes two years to ripen; it is round, of a bluish-black color, with a whitish bloom; it is of the size of a



Common Juniper
(*J. communis*).

a, branchlet with male flowers;
b, part of branchlet with female flowers; *c*, unripe fruit.

small currant, and is produced in great abundance. The little nuts or stones of the fruit have on the shell three glands, which abound, especially before ripening, in an essential oil—*Oil of J.*—present also in the wood, particularly in the young wood. The wood is yellowish red, brownish in the heart, hard, and fragrant. When of sufficient size, it is much valued by turners. It is used also for veneering. The dry twigs, roots, and berries are used for fumigation. The berries have a strong and peculiar flavor. They are much used for flavoring gin, which derives its name from them (see GIN). They also enter into several medicinal preparations, being stimulant, sudorific and diuretic.—The bark of *J.* may be made into ropes, and in some parts of the Highlands of Scotland, the roots are woven into the coarse baskets which are used for potatoes, peats, etc.—*Oil of J.* is lighter than water; specific gravity, 0.839. It

is limpid and nearly colorless. It is obtained by distilling the unripe fruit, or the twigs, with water. The medicinal properties of *J.* depend on the oil; six drops are a dose.—SPANISH *J.* (*J. oxycedrus*) grows in arid situations in countries around the Mediterranean Sea. Its fruit is about the size of a hazel-nut; and from its fruit and wood is procured an essential oil of disagreeable odor, called *Huile de Cade* (q.v.), which is used in veterinary practice, particularly as a cure for scab in sheep.—VIRGINIAN *J.* (*J. Virginiana*), the RED CEDAR of N. America, is an evergreen tree, often 30–50 ft. high, of conical form, with horizontal branches and very small leaves; native of N. America, from Lake Champlain to the Gulf of Mexico. It grows in sandy or rocky places. It is often planted in pleasure-grounds in Europe, and thrives in Britain. The berries are small, and bright blue. The heart-wood is of a beautiful red color, and is valued by turners, coopers, etc. It is exported to England for making pencils. There are often found on the branches fungous excrescences called *Cedar Apples*, recommended as a vermifuge.—The BERMUDAS CEDAR (*J. Bermudiana*) is a native of the Bermudas, a lofty tree, with very fragrant reddish-brown wood, used for furniture, pencil-making, etc., also for lining cabinets, its

JUNIOUS.

flavor preventing attacks of moths and other insects.—The Himalaya Mountains produce several species of J., trees of considerable size, beautiful appearance, and valuable wood. The only species of J. which is a native of Britain is the Common J., found chiefly in the more hilly parts.—The SWEDISH J. of some shrubberies is merely a variety of the common juniper. JU'NIPERITES, n. plu. *-its*, in *geol.*, fossil coniferæ, evidently allied to the juniper.

JUNIUS, *jūn'yūs*, FRANCISCUS (FRANÇOIS DU JON): 1545–1602; b. Bourges, France: Prot. theologian. He desired to study law, but accepting the principles of the Reformation went to Geneva, studied classical philology and Prot. theology, became pastor of a Walloon congregation in Antwerp 1565, and chaplain to the Prince of Orange 1568. In 1573 the elector-palatine summoned him to Heidelberg, where he aided Tremellius in making a Latin translation of the Old Test., and he afterward became prof. of theology at Heidelberg Univ. and at Leyden Univ.—His son, FRANCISCUS J., 1589–1677, Nov. 19; b. Heidelberg, was librarian to the Earl of Arundel, of England, for 30 years, became famous as a philologist, was author of many works—notably *Glossarium Gothicum* in 5 languages—and bequeathed his valuable mss. to the Bodleian Library of Oxford.

JUNIUS, *jūn'yūs*, LETTERS OF: famous series of political letters signed 'Junius,' which appeared in a London newspaper, *The Public Advertiser*, during the last year of the administration of the Duke of Grafton and the first two of that of Lord North, 1769, Jan. 21–1772, Jan. 21. They were 44 in number; besides which, are reckoned as from the same pen, 15 signed Philo-Junius, 62 business-letters (mostly very short) addressed to his publisher, Woodfall, and 10 to Wilkes (privately); and in addition; 113 letters under various signatures. The first of the letters of J. treats of the 'State of the Nation,' and may be said to strike the key-note of all the subsequent epistles. In it, the author singles out several leading members of the ministry, and boldly denounces their inefficiency; and the last of the letters closes somewhat suddenly the long indictment against ministers in the same spirit in which it had begun. No sooner did the first Junius letter appear, than the court-party took the alarm. An invisible and dreaded censor was evidently moving among them—one who, though as yet the days of parliamentary reports were still far off, seemed cognizant of all the proceedings of both Houses, who not only knew intimately the public career of ministers, but was fully informed regarding the follies and the crimes of their private character. Sir W. Draper, who entered into controversy with this unknown adversary, was in the end overmastered, and reduced to mere humble complaint and confession. The Duke of Bedford, Lord Mansfield, and chief of all, the Duke of Grafton, writhed beneath his lash—the last of these being more indebted for immortality to the splendid sarcasm of Junius than to any measure which it was his fortune to introduce. It cannot,

JUNK.

however, be denied that the hatreds of Junius, though springing for the most part from his detestation of injustice, and his contempt for incapacity, were increased and imbibed by party spirit and personal dislike. His force is not in his argument or his proof so much as in his style. Some of the things on which he turns his keenest sarcasm are now recognized as meriting instead the highest praise. The style of these letters, though occasionally somewhat stiff and formal, is of the very highest class. Occasionally rising to lofty eloquence, it is always remarkable for force of expression, felicity of illustration and allusion, brilliant epigram and polished invective. Whoever Junius was, his life depended on his preserving his *nom de plume*. He had made too many enemies to be safe in acknowledging himself. From the day of the publication of his first letter, however, conjecture has been busy framing theories of the authorship. In 1855 a list was published of 37 persons to whom the authorship had been ascribed. Burke, Lord Shelburn, Colonel Barré, Lord George Sackville, Wilkes, Horne Tooke, Earl Temple, the American General Lee, Thomas Lord Lyttelton, among others, were supposed in turn to be Junius; but after the appearance of Taylor's *Junius Identified*, 1816, the general opinion was that Sir Philip Francis (q.v.) was the author. The Franciscan theory is supported by a weight of evidence, which, though entirely circumstantial, is sufficient, Macaulay thought, 'to support a verdict in a civil, nay, in a criminal proceeding.' The handwriting of Junius is the handwriting of Francis slightly disguised. Junius, as is evident from his letters, knew the forms of the secretary of state's office, was intimately acquainted with the business of the war office, attended the house of commons in 1770, and took notes of speeches, especially of those of the Earl of Chatham; denounced the promotion of Mr. Chamier in the war office as unjust to *Mr. Francis*, and was bound by some strong tie to the first Lord Holland. All these circumstances in the position of Junius correspond exactly with the history of Francis. Some of the best authorities, however, hold that Francis was not Junius; they adduce the fact that those who knew Francis best saw in him no such capacities as the letters of Junius show, and that Lord Brougham confirmed this as the opinion of the contemporaries of Francis: the *Athenæum* (1882) calls the identification an 'absurd theory;' and the *Ency. Britannica* (9th ed.) regards the authorship as being as much a mystery as ever. See Chabot and Twistleton's *Handwriting of Junius Professionally Investigated* (1871); also *Junius*, by Woodfall (1850), and Macaulay's *Essays* (Warren Hastings).

JUNK, n. *jüŋk* [Scot. *junt*, a lump: Swiss, *jante*, a haunch—representing the sound made by a lump thrown on the ground: parallel forms are *chunk*, a log of wood, and *chump*, a thick piece: Port. *junco*, a rush, a junk]: a lump or piece; pieces of old cable, rope, or cordage; salted beef sometimes supplied to ships for long voyages, so named as being hard and tough as rope-ends. JUNK-BOTTLE, a bottle, usually of green glass, made thick and strong.

JUNK—JUNO AND HERA.

JUNK-RING, a steam-tight packing round the piston of a steam-engine.

JUNK, n. *jŭngk* [Chin. *chw'an*, a ship or boat: Mal. *jóng*, a vessel of considerable size: Port. *junco*]: Chinese, Japanese, or Malay vessel, often of large dimensions. It has a high forecastle and poop, and ordinarily three masts, Junks, although clumsy vessels incapable of much seamanship or speed, have proved themselves seaworthy on voyages extending even to America and Europe. The junk of Japan is considerably superior to that in use in China.

JUNKET, n. *jŭng'két* [It. *giuncata*, dainty fresh cheese brought to market on fresh rushes—from It. *giunco*; L. *juncus*, a rush: F. *joncade*, a delicacy made of cream, rose-water, and sugar—from *jone*, a rush]: curds mixed with cream sweetened and flavored; a sweetmeat: V. to feast secretly or by stealth; to feast; to frequent entertainments. **JUN'KETING**, imp.: ADJ. feasting: N. a private feast or entertainment. **JUN'KETED**, pp.

JUNKIN, *jŭn'kin*, GEORGE, D.D., LL.D.: 1790, Nov. 1—1868, May 20; b. near Carlisle, Penn.: educator. He graduated at Jefferson College 1813, held pastorates in the Assoc. Reformed and Presb. Churches, founded and became pres. of Lafayette College 1832, was pres. of Miami Univ. 1841–44, again pres. of Lafayette College, 1845–48, and pres. of Washington College, Va., 1848–61. He was moderator of the Gen. Assem. of the Presb. Church 1844, a champion of the 'old school' branch of American Presbyterianism, a stanch Union man through the civil war, and author of a number of controversial works.

JUNKSEYLON, *jŭnk-sē-lŏn'*, or **SALANG**, *sá-láng'*: island in the Bay of Bengal, lat. 7° 46' n., and long. 98° 18' e., near the w. coast of the peninsula of Malacca. It belongs to Siam, and trades chiefly with the British settlements of Malacca, Penang, and Singapore. It yields tin, edible birds'-nests, and Japan wood.

JUNO, *jŭ'no*, AND **HERA**, *hē'ra*: in mythology, the Roman and Greek names of the queen of heaven, and wife of Jupiter, the supreme divinity. The Roman and Grecian conceptions have unfortunately been confounded, and their essential dissimilarity has been lost sight of—a dissimilarity as great as that which existed between the Roman and Greek character.

HERA [Gr. mistress], the Greek goddess, was daughter of Kronos and Rhea. She was sister of Zeus, and afterward became his wife. Her jealousy is proverbial, and was unfortunately too well founded, for Zeus was the reverse of a faithful husband. In the Homeric poems, she appears, on the whole, as an obstinate, quarrelsome shrew, whose temper is a source of frequent discord between herself and her lord, whom, however, she greatly fears. She is represented as often spitefully favoring persons who were the objects of the displeasure of Zeus, and has to be punished for her disagreeable ways. Zeus scolds and even beats her; and on one occasion, we read of his having tied

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her hands, and hung her up in the clouds. But she is, nevertheless, a female of majestic beauty, grandest of the Olympian dames. As the only wedded goddess in the Greek mythology, she naturally presided over marriage and at the birth of children. She rode in a chariot drawn by two horses; and in her famous temple at Mount Eubœa, her statue, made of gold and ivory, bore a crown, symbolic of her queenly dignity. Her favorite residences were Argos, Sparta, and Mycenæ; but she had sanctuaries in many parts of Greece. The Greek artists like to represent her as a majestic woman of middle age; with maternal dignity of mien, beautiful forehead, large eyes, and venerable expression. Homer repeatedly calls her 'the venerable ox-eyed Hera.'

JUNO [name from the same root as Jupiter], the Roman goddess, was the queen of heaven, and under the name of *Regina*, was worshipped in Italy at an early period. She bore the same relation to women that Jupiter did to men. Like the Greek Hera, she took a special interest in marriage, whence her name of *Juga* or *Jugalis* (the yoke-maker); but she was also a kind of female Providence, protecting woman from the cradle to the grave. Her epithets, *Virginalis* (goddess 'of virgins') and *Matrona* ('of mothers'), indicate this. It is a very significant feature of the Roman character, that J. was believed to be also the guardian of the national finances, watching over her people like a thrifty mother and housewife. A temple, containing the mint, was erected to her on the Capitoline as J. *Moneta* (the money-coiner). She was besides the goddess of chastity, and prostitutes were forbidden to touch her altars. She had a multitude of other surnames. Her great festival was called the *Matronalia*, and was celebrated on the 1st of March. Her month (June) was considered the most propitious for fruitful marriages; and even yet, after 18 centuries of Christianity, this old Roman faith lingers superstitiously in the popular mind.

JUNOT, zhü-nō', ANDOCHE, Duke of Abrantes, and Marshal of France: 1771, Oct. 23—1813, July; b. Bussey-le-Grand, in Côte-d'Or. He entered the army as a volunteer 1792, and distinguished himself in the early wars of the republic. In 1798, he followed Napoleon to Egypt, was there created gen. of brigade, and particularly distinguished himself at Nazareth, where, at the head of 300 cavalry, he put to flight 10,000 Turks, after a conflict of 14 hours. In 1807, he was appointed to command the army of Portugal. His army, after dreadful privations, reached Lisbon, and J., with the greatest expedition, made himself master of all the strong places in the kingdom, and reorganized his army. For his brilliant conduct at this time he was created Duke of Abrantes, and appointed gov. of Portugal; but the brilliant commander showed himself weak in administration. Being defeated by Wellington at Vimieira, he concluded a convention at Cintra, returned to France, and subsequently served in Germany, Spain, Portugal, and Russia. In 1812, he was disgraced by Napoleon for a supposed want of energy, and sent to govern Illyria. This,

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with other causes, produced mental derangement. He was taken to his father's house at Montbard, near Dijon, and two hours after his arrival, precipitated himself from a window and fractured his thigh-bone. Amputation was performed, but J. frantically tore off the bandages, and died some days afterward.—His wife, LAURE PERRON J., the celebrated Duchess of Abrantes, gained notoriety for reckless extravagance like that of an oriental queen, and gained reputation in the literary world by her *Mémoires ou Souvenirs historiques sur Napoléon, la Révolution, le Directoire, le Consulat, l' Empire, et la Restauration* (Paris 1831-35), and by several minor works.

JUNTA, n. *jün'tä* or *jün'tä* [Sp. *junta*, or *junto*, a meeting, an assembly—from L. *unctus*, joined, united]: in *Spain*, a grand council of state. **JUNTO**, n. *jün'tō*, a select council or assembly; a select body of men combined secretly for political purposes; a cabal; a faction.

JUPATÍ PALM, *zhô-pá'tê pá'm* (*Raphia tædiger*): palm which grows on rich alluvial tide-flooded lands near the mouth of the Amazon. The stem is seldom more than six or eight ft. high; but the leaves are often 50 or 60 ft. long, rise vertically from the summit of the stem, and bend out on every side in graceful curves, forming a magnificent plume. The leaves are perhaps the largest in the vegetable kingdom; they are pinnate, the leaflets about four ft. long. The leaf-stalks, which are often 12 or 15 ft. long below the first leaflets, and four or five inches in diameter, perfectly straight and cylindrical, are almost like birds' quills in strength and lightness, when dried, of a soft substance, with a thin hard, glossy outer covering. They are used for various purposes, as for laths, window-blinds, etc. The interior part is soft enough to be used instead of cork.

JUPITER, n. *jô'pî-tér* [L.]: in Roman mythology, chief god of the Roman state. The name is a modification of *Diovis pater* or *Diespiter* (*Diovis*, or *Dies* = *divum*, heaven), i.e., the Father of Heaven or the Heavenly Father. As such, J. had all power over the phenomena of the skies; hence his numerous epithets, such as *Pluvius* (Rain-giver), *Tonans* (Thunderer), *Fulminator* (Lightning-hurler), and *Seruator* (Weather-clearer). But he possessed higher and diviner attributes. The future was spread out clearly before his all-seeing eye; the destinies of men were in his hands, and events were but the expression of his omnipotent will. But he was not careless of mankind. He revealed himself in a variety of ways to them, and taught men to interpret these mystic and symbolic revelations. Wonderful appearances in the sky, or unwonted circumstances happening on the earth, were the *media* of his communications; hence his surname of *Prodigiatus* (Sender of Prodigies). As the national god of the Roman people, he went with them into battle (like the Jehovah of the Hebrews), fought for them, procured them victory, and, generally speaking, was their protector at home and abroad. This conception of J. is shown in such names as *Imperator* (Ruler), *Victor* (Conqueror), *Stator* (Stayer or Stander by). The strong

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sense of morality which marked the old Romans found its expression in their view of the character of the best and greatest (*optimus maximus*) of their gods. J. was the guardian of law, justice, and virtue; oaths and all solemn engagements were made as to him ('in the sight of God,' as we say). He had temples erected to him at Rome under all his different names; but the principal one was that on the Capitol, whence he had the title *Capitolinus*, and where, with beautiful significance, the statues of *Fides* (Faithfulness) and *Victoria* (Victory) were placed beside his own. When consuls or other magistrates entered on the duties of their office, or when the army was about to open a campaign, or a general returned victorious from war, sacrifices were solemnly offered to J., and his favor invoked. When the Romans began to know the anthropomorphic religion and literature of Greece, they foolishly proceeded to identify their own grave, majestic, and morally reputable J. with the slippery, lustful, and immoral *Zeus* of the Greeks. Hence have originated much confusion and misconception. See ZEUS.

JU'PITER (Planet): see PLANETS: SOLAR SYSTEM.

JU'PITER AM'MON: see AMMON.

JUPITER SERAPIS, *jŏ'pĭ-tēr sĕ-rā'pĭs*, TEMPLE OF: ruined temple at Puzzuoh, near Naples: affording a remarkable instance of the changes which have taken and are taking place in the relative position of the land and water on the earth. Only three of the original 46 pillars are standing. They rise out of the water, the pavement of the temple being at present submerged; but they bear evidence that they have been at one time submerged to half their height, which is 42 ft. The base of the pillars as high as 12 ft. is quite smooth; for the next nine ft. they are penetrated by a boring shell, which is still active in the neighboring rocks. The water must have covered this portion of the pillars, and while the mollusks were busy, the lower 12 ft. must have been protected from their ravages by being buried in mud. The changes of level have been so gradual that the pillars have not been moved from their original position.

JUPON, *jŭ-pŏn'*, or JUST-AU-CORPS, *zhüst-ō-kŏr*: a surcoat; especially the short tight form of that military garment in use in the 14th c.

JU'RA: island, one of the Inner Hebrides; off the coast of the mainland of Argyle, Scotland, and having the island of Islay on the south-west. It is 27 m. long, and about five m. in average breadth. A ridge of bleak and rugged mountains traverses the whole length of the island, and rises in the *Paps of Jura*, in the s., to 2,566 ft. The w. coast is deeply indented by Loch Tarbert, which nearly divides the island in two. The w. shores are savage and rugged; the e. are pleasing in appearance, presenting green slopes and a belt of plain. At the n. extremity of J., and between it and Scarba, is the whirlpool of Corrievrekin (q.v.). About 600 acres are under cultivation. Oats, bar-

JURA—JURE DIVINO.

ley, potatoes, and flax are produced; and black cattle are reared for export. Pop. (1871) 761. (1881) 773.

JURA, *jô'ra*, Ger. *yô'rá* F. *zhü-rá'* [Lat., from a word meaning *forest*]: range of mountains, of a peculiar limestone formation known as the Jura Limestone, extending n.e. from the angle formed by the Rhone and the Ain, (with a gradually declining elevation), more than 450 m., to the upper part of the course of the Maine. The Rhine, breaking through the J. between Schaffhausen and Basel, divides it into two parts, the Swiss or French, and the German Jura. The loftiest peaks are Reculet de Toiry, Grand-Colombier, Credoiz, Dôle (which commands a splendid view of Mont Blanc), and Mont d'Or, all between 5,000 and 6,000 ft. in height. The Swiss J. consists of a number of parallel chains with long deep valleys between, and over it roads have been carried with great difficulty; but the German J. is broken up by cross valleys. In both parts of the range are numerous caves, which abound in magnificent stalactites, and in the bones of extinct animals; while in the Swiss J., there are several instances of rivers of considerable size sinking into the ground, and reappearing after some distance, as the Orbe, the Doubs, and the Creuse. The s. portion of the range lies partly within the French dept. of J., to which it gives its name, Magnificent pine-forests are here a characteristic feature of the scenery.

JU'RA: frontier dept. in e. France, bounded s. by the dept. of Ain, e. by Switzerland; 1,920 sq. m., of which more than one-third is under cultivation, and about one-fourth in wood. Of its surface, two-thirds are covered by the J. Mountains; the remainder is a low plain about seven m. wide, skirting the w. border. Chief rivers—the Ain, the Doubs, and the Loue. The soil on the mountains is thin and stony, but yields abundant grass, on which great numbers of horses and cattle are fed from June to Oct.; on the plain, the soil is rich, producing various and abundant grain-crops. The wines of Arbois, of Poligny, of Etoile, and of Salins, have some reputation; 9,000,000 gallons of wine are produced annually. The mineral wealth of the dept. is considerable; the working of iron is one of the chief manufacturing industries. Cheese is extensively made, and there is good trade in timber. The dept. is divided into the four arrondissements, Lons-le-Saulnier, Poligny, Sainte-Claude, and Dôle. Capital, Lons-le-Saulnier. Pop. (1881) 285,263.

JURASSIC, a. *jô-răs'sik*: in *geol.*, applied to the Oolitic system, from the characteristic occurrence of its strata in the Jura Mountains: see **OOLITE**.

JURAT, n. *jô'răt* [Norm. F. *jurat*—from L. *jūrāt*, he swears; *jūrātus*, sworn]: a person sworn; one under the responsibility of an oath. **JURATION**, n. *jô-ră'shŭn*, in *law*, act of swearing; administration of an oath.

JURE DIVINO, *jŭ'rē dĩ'vī'nō* [Lat.]. phrase, meaning *by divine right*; applied to a form of civil government or of church polity, as denoting not only its expediency and its rightfulness for practical uses, but also the fact that it has

JURIBALLI-BARK—JURISPRUDENCE.

been divinely established or authorized as exclusive of any other form.

JURIBALLI-BARK, n. *jū-rī-bāl'ī-bārk* [*juriballi*, a Demerara wood]: in *phar.*, a bark said to be superior to cinchona bark in typhoid and malignant fevers. It is a cordial and purgative, and, when taken warm, a diaphoretic.

JURIDICAL, a. *jō-rīd'ī-kāl* [L. *juridicus*, relating to the administration of justice—from *jura*, laws; *dicāre*, to proclaim, to pronounce—see Skeat: F. *juridique*]: pertaining to a judge; acting in the distribution of justice; used in courts of justice. **JURIDICALLY**, ad. *-lī*. **JURISDICTION**, n. *jō-rīs-dīk'shūn* [OF.]: legal power or authority; the power or right of exercising authority; the district to which the authority or power of dispensing justice extends. **JURISDICTIONAL**, a. *-shūn-āl*, pertaining to jurisdiction. **JURISDICTIVE**, a. *tiv*, having jurisdiction. **JURIDICAL DAYS**, days on which the courts can lawfully sit.

JURISCONSULT, n. *jō-rīs-kōn'sūlt* [F. *jurisconsulte*—from L. *jurisconsultus*, one skilled in the law—from *juris*, of law; *consultus*, a lawyer; *consultus*, consulted]: a man learned in law; one who gives his opinion in cases of law, particularly of Roman law.

JURISDICTION, in Law [see **JURIDICAL**]: authority which a court or judge has to entertain a particular case and decide it. The general rule, is, that if a court which has no J. to decide a particular case, does decide it, the judgment is a mere nullity. Many nice questions arise on the general question of jurisdiction.—J. is classified as Original, in the case of a court which has primary jurisdiction over a cause; Appellate, over a cause appealed from a lower court; Exclusive, by only one tribunal; Concurrent, by more than one tribunal; also, Civil, Criminal, etc. See **CONFLICT OF LAWS**.

JURISPRUDENCE, n. *jō-rīs-prō'dēns* [F. *jurisprudence*—from mid. L. *jurispruden'tiā*—from L. *juris*, of law; *prūden'tiā*, prudence, practical judgment]: science of law; knowledge of the laws, customs, and rights of men necessary for the administration of justice. **JURISPRUDENT**, a. *-dēnt*, understanding law: N. one versed in jurisprudence.—*Jurisprudence*, as a science, deals with the principles on which legal rights should be protected and enforced; this theoretic or speculative J. may be called the philosophy of law—a department which has been less cultivated in England than in continental Europe, or even in Scotland; for, in England, the habits of the people and also of their lawyers, are too practical to admit of spending time in discussing elementary principles more or less vague and speculative. In its literal sense, the term means merely knowledge of the law, and seems to have been so used in the Roman law, from which it has been borrowed. The word is often used in a popular sense to denote the whole body of positive law—i.e. a practical J.; but it is more correctly used in distinction from law, as implying the system or supposed methodical scheme embracing the principles on which

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positive law is founded. A distinction is sometimes made between general J., which investigates the principles common to various systems of positive law, divesting these of their local, partial, and other accidental peculiarities; and particular J., which confines itself to the particular laws of the United States, or England, or France, as an independent system taken by itself. J. thus embraces a wide range, as treating of all those duties which are enforced between man and man; and yet it may be safely said, that lawyers, though dealing with the results of the science every day of their lives, seldom give much attention to the latent and general principles on which these results are founded. The science of speculative J. is indeed far from exact and has till within recent years, made little advance since the days of antiquity. The only British writers who have devoted their attention to this speculative side of the law are Bentham, whose various works abound with these discussions, and Austin whose *Province of Jurisprudence Determined* is an acute and masterly work on first principles; to whom may be added John Stuart Mill and H. S. Maine.

MEDICAL JURISPRUDENCE: science which applies the principles and practice of medicine to the administration of justice and the preservation of the public health. It comprises the application of the leading principles of nearly all the physical sciences, such as meteorology, physical geography, anatomy, physiology, pathology, therapeutics, surgery, chemistry, botany, mental philosophy, and hygiene. The questions of more or less doubt that arise in courts of law and can be elucidated or adjudicated only by this science are included in the classifications: (1) those arising from the relations of sex; (2) those relating to injuries inflicted on the living organization; (3) those arising out of disqualifying diseases; (4) those arising out of deceptive practices; (5) miscellaneous ones in which expert medical testimony is required. To briefly particularize these classifications, the science is now regarded as indispensable in the determination of cases involving (1) impotence, sterility, hermaphroditism, rape, pregnancy, legitimacy, delivery, (2) infanticide, wounds, poisons, persons found dead; (3) mental alienation; (4) feigned diseases; (5) age, identity, presumption of seniorship, life insurance. In all these cases legal procedure is facilitated if not directed by the testimony of experienced physicians and surgeons. Insanity, set up as an excuse for crime; suicide, as a reason why a life insurance contract should be declared invalid; legitimacy and delivery, claimed as requisite for property inheritance; survivorship, sought to be determined for heirships where two related persons like father and mother, brother and sister die at the same moment; homicide or suicide, in cases of persons found dead; poisoning, whether accidentally or feloniously accomplished, are among the instances most frequently arising in courts of law wherein civil and criminal procedure would be wholly obstructed were it not for the aid rendered by this science. A medical witness, like an ordinary one, may testify to whatever has come to his own knowledge by sight or personal narra-

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tion concerning a specific case at issue; a medical expert may do this and more, for without personally knowing anything about the case, he is expected by reason of his special education to enlighten the court and jury on a statement of hypothetical facts. He testifies that if the statements submitted to him are true as alleged, the condition of the person must have been thus or so at the time specified, and could not have been otherwise. Medical J. is termed a modern science, is known also as legal or forensic medicine, and has a very extensive literature.

JURIST, n. *jŏ'rist* [F. *juriste*; Sp. *jurista*, a jurist—from L. *jus*, law, *jura*, laws]: one who is skilled in law, especially civil law. **JURISTIC**, a. *jŏ-ris'tik*, having a juridical character.

JUROR, n. *jŏ'rér* [F. *jureur*—from L. *juratorem*, a swearer—from L. *jurāre*, to swear]: one who serves on a jury. **NON-JURORS**, *nŏn-jŏ'rérz* [L. *non*, not; *juror*, I take an oath]: in *Eng. hist.*, after the Revolution, a name applied to a considerable number of clergymen who refused to take the oath of allegiance to the new government: see **JURY**.

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JURY, n. *jô'ri*. [Norm. F. *jurée*, a jury: F. *juri*, a jury—from *jurer*, to swear—from L. *jūrārē*, to swear]: in a *court of law*, a certain number of men selected for the purpose, who are constituted the judges of the truth of the facts in suits between parties, and compelled to discharge this duty on the sanctity of their oath, but in subordination to a higher judge, who has distinct functions of control. **JUROR**, n. *jô'rēr*, also **JU'RYMAN**, n. one who serves on a jury. *Note*.—A **GRAND JURY** consists of not more than 23; a **PETTY** or **SPECIAL JURY** of 12—in *Scot.*, generally of 15.—Various theories have been adopted as to the origin and development of the trial by jury. It does not owe its existence to any positive statute, but has grown up insensibly, and has become inextricably interwoven with the habits of the people of Britain and the United States. It was generally supposed, until recently, that our Anglo-Saxon ancestors had the credit of having nursed the germ of this vigorous plant of liberty; and a cartoon in the new houses of parliament in London has embodied this popular belief. Recent researches, however, have shown that J. trial, as now known and practiced, did not exist in Anglo-Saxon times, though it has been the natural development and sequence of rudimentary forms of trial then prevailing. Indeed, the germ of J. trial is found in human nature itself, and in some phase or other, is detected in almost every form of civilization, the essence of it being a reference of disputed facts to the impartial judgment of a few men of average understanding and of nearly the same station in life as the litigants. In ancient Rome, a criminal trial was conducted before a presiding judge and a body of *judices*, taken from a particular class, whose duty it was to determine the fact of the guilt or innocence of the accused; but they could exercise the prerogative of mercy, which does not belong to the modern jury. The result of the forms of trial usual with the Anglo-Saxons has been summed up by Forsyth in his *History of Jury Trial*, and he states these conclusions. Courts were presided over by a reeve, who had no voice in the decision, and the number of persons who sat was usually twelve. The assertions of parties were admitted as conclusive, when supported by the oaths of a certain number of compurgators. The testimony of the neighborhood was appealed to for the purpose of deciding matters of general concern. Sworn witnesses were appointed in each district, whose duty it was to attest all bargains and transactions, in order that they might be ready to give evidence in case of dispute. Every care was taken that all dealings between man and man should be as open and public as possible. It was by a gradual process of improvement that the precise functions of the J. were defined, and the J. system established as it has existed for centuries.

The functions of the judge and the J. are distinct: the judge has no right to decide the fact, nor the J. to decide the law; though there are classes of cases in which, practically, the J. cannot be prevented from deciding both. In

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some cases the separation of the functions of judge and J. requires very nice discrimination.

Before passing to the J. system as it exists in the United States—and for the most part in England—some differences pertaining to the Scotch practice may be noted. In criminal trials in Scotland, from 45 jurors 15 are drawn by lot, and the verdict of a majority suffices. There is also a verdict of 'Not proven' allowed to be given, and which is often preferred by the jury in cases where there is little moral doubt, though the legal evidence is insufficient. It is so far final in Scotland that the prisoner cannot a second time be put on his trial. The expediency of such a verdict has been objected to as fixing a stigma on the accused person; but the answer has been made, that it is most in conformity with the true result of the inquiry. In civil cases in Scotland, the J. consists of 12 persons, and the verdict of a majority suffices.

In the United States the right to trial by J. is guaranteed by the federal constitution (Art. III. section 2) in the following language: 'The trial of all crimes, except in cases of impeachment, shall be by jury.' This however has not been interpreted to mean that all offenders are entitled to J. trial. It refers to the graver offenses; such as were crimes at common law. Petty offenders are not entitled to a J. trial. By the fifth amendment to the federal constitution, 'No person shall be held to answer for a capital or otherwise infamous crime, unless on a presentment or indictment of a grand J., except in cases arising in the land or naval forces, or in the militia when in actual service in time of war or public danger.' The sixth amendment to the same instrument guarantees the accused the right to a speedy and public trial by an impartial J. of the state and district where the crime charged shall have been committed. The seventh amendment preserves the right to a J. trial in suits at common law where the value of the controversy exceeds \$20. Nearly every state constitution repeats these guarantees. The varieties of J. known in the United States comprise the *grand jury*, drawn for indicting offenders against the criminal law; this J. however does not sit for trial; *jury de mediate lingua* (now generally abolished by statute), composed equally of aliens and citizens; *petit* or *traverse jury*, which tries a cause and renders a verdict on the evidence; *special jury*, drawn by the assistance of the parties to an issue by striking from the list of jurors the names of such parties as may be objectionable to either side till 12 names are left; *struck jury*, specially chosen from the men whose occupations would make them familiar with the subject-matter of an issue—e.g., masons, carpenters, builders, on a suit growing out of a building contract; *coroner's jury*, summoned by a coroner to determine the cause of or responsibility for a death; *sheriff's jury*, of no determinate number, summoned by a sheriff for various inquisitions, and, in some states, to determine the sanity of persons.

Originally it was deemed essential that the J. be taken from the immediate neighborhood or *visne* where the cause

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of action arose, or the offense occurred. In this way the jurors anciently were also the witnesses. The idea that the jurors must reside in the same district or neighborhood is still largely preserved, though more extended views are taken of what constitutes a vicinage for this purpose. Thus in some states if competent jurors cannot be found in the county in which the trial is had, the courts are authorized to summon them from adjoining, or from any other counties in the state. As respects the number necessary to constitute a valid J. it may be said that in regard to civil trials, while 12 is the number usually employed in the higher courts, a less, or even a greater number may be taken if agreeable to both parties, and in inferior courts a number less than 12, usually 6, is customary in civil trials. In criminal trials, the *grand jury* consists of some number over 12 and less than 24, usually 23. The trial J. in criminal prosecutions must, in cases of felony, consist of 12, neither more nor less. In misdemeanors, the same rule originally prevailed as in cases of felony, and the number 12 was rigidly insisted on. It is now, however, provided in some of the states, that less than 12 may constitute a valid trial J. in cases of misdemeanor. It is for the legislatures of the various states, subject however to the constitutional right of the people to J. trial, to fix the qualifications of jurors. Thus it would be incompetent for the state legislatures to impose such restrictions as would either reduce the number eligible to J. duty to an abnormally small or select class, or to require such unusual or difficult qualifications that only a privileged class could respond. As a rule, citizenship, good character, and a certain amount of general education are universally required. In addition, many of the states require the juror to be either a freeholder, householder, or owner of property to a certain amount. The limit of age is from 21 to 60 years, in some states to 70 years of age. The rates of compensation, length and frequency of service, and causes of exemption differ in various states. As a general rule, the following, when actually engaged in their respective callings, are exempt from J. duty, though they are not disabled from acting if they choose to waive the privilege: ministers, attorneys, physicians, firemen, policemen, officers and privates in the state militia. In some of the states, certain public officials, such as the governor, members of the legislature, judges of courts of record, and sheriffs, are disqualified from acting as trial jurors. Grand and petit juries drawn in the federal courts are substantially the same as those of state and municipal courts.

Discussion has arisen within recent years as to whether the J. system should not be abolished and trial by judges alone take its place. Briefly, the arguments may be summarized as follows: In favor of the continuance of the system it may be said, that it is a school of legal and political education for the people; that it stands as a bulwark between the executive and the people in the protection of political rights; that jurors are more competent than judges to pass upon facts; that it requires each citizen to maintain an

JURY-MAST—JUS MARITI.

active interest in the administration of justice and consequently to see to it that the administration of justice is kept pure. Against the J. system it may be urged, that the class of citizens best qualified to act as jurors, namely, active business men, are the least anxious to serve and in fact seize every pretext to escape from jury duty; that it is an expensive, inconvenient, cumbrous system; that jurors for the most part are incompetent to seize upon and apply the evidence developed because not trained to the work; that passion, sympathy, fear, malice, anything and everything but the desire to do strict and impartial justice, render the ultimate decision in each case a work of chance. In the opinion of the majority who have carefully studied this question, the J. system as at present administered is totally inadequate to meet the demands of the age. It is the application of mediæval principles to a modern civilization. Yet while it is easy to condemn the J. system, it is not easy to find an adequate substitute. One recently suggested is, that instead of requiring a verdict to be the unanimous conclusion of the J., as at present, a majority decision be accepted. In the opinion of some acquainted with legal practice, this would work well in civil trials, and would be an improvement on the present system. But in criminal trials its application would be dangerous, because before an accused person is convicted there should be no reasonable doubt of his guilt in the mind of any of the jurors. While the people may eventually, perhaps in the near future, be willing to give up J. trials in civil cases, it is not probable that they will dispense with them in criminal prosecutions.

JURY-MAST [a supposed corruption of *injury-mast*: also said to be from F. *jour*, a day, as being only a temporary mast]: in a *ship*, a temporary mast placed instead of another one lost or carried away, as in a storm. **JURY-LEG**, among *sailors*, a wooden leg; not a real leg, but one to serve instead, for a time as it were.

JUS DELIBERAN'DI [Lat., right to deliberate]: see **ANNUS DELIBERANDI**.

JUS DEVOLU'TUM [Lat., right having devolved]: formerly in Scotch ecclesiastical law, a phrase denoting the right which devolved on the presbytery to present or appoint a minister to a vacant benefice, if the patron did not within six months present a properly qualified person.

JUS GEN'TIUM [Lat. law of nations]: phrase now translated to mean a branch of International Law (q.v.)

JUSHPORE *jush-pôr'*: protected state on the s.w. side of Bengal Proper, entirely surrounded by British territory; 1,947 sq.m. Its chief place is a town of the same name. The country, a table-land, is much overrun with jungle, the cleared ground producing grain, chiefly rice, and oil, and the uncleared portions abounding in wild silk. Pop. 66,926.

JUS MARITI, *jūs mār-ī'tī* [Lat., right of the husband]: phrase used in Roman law, and adopted in the Scotch law to denote the legal right accruing to a husband *qua* husband over his wife's property: see **HUSBAND AND WIFE**.

JUS RELICTÆ—JUSSIEU.

JUS RELIC'TÆ [Lat., right of the widow]: in Scotch law, the right of a widow to a share in the movable or personal property of her deceased husband. This is a vested or absolute right, and cannot be defeated by the husband's will: see **GOODS IN COMMUNION: HUSBAND AND WIFE: SUCCESSION**.

JUS REPRESENTATIONIS [Lat., right of representation]: phrase adopted by the Scotch from the Roman law, to denote that in heritable succession, also to a limited extent in movable succession, when one or more of the children of a deceased person have predeceased, the children of such predeceasing children represent their parent, and take his or her share.

JUSSIEU, *zhüs-sē-üh'*, **DE**: family which, for more than a century and a half, comprised some of the first botanists of the age.

ANTOINE DE J., 1686–1758; b. Lyon; d. Paris. He was prof. at the Jardin du Roi, and author of various works on botany; among them, *Appendix to Tournefort* (Lyon 1719). He made several voyages and journeys for collecting plants, being accompanied by his younger brother Bernard, his assistant.

BERNARD DE J., 1699–1777; b. Lyon; d. Paris; bro. of Antoine de J. He contented himself in assisting his brother and nephew, without seeking renown by the publication of his own important observations. Having been named supt. of the gardens at the Petit-Trianon 1759, he arranged the plants in accordance with a natural system substantially the same as that which his nephew and pupil, Laurent de J., subsequently elaborated and perfected. As Bernard refused to make publicly known the principles on which his mode of arrangement was based, the glory of his labors devolved upon Laurent, who alone possessed the key to this botanical enigma.

ANTOINE LAURENT DE J., 1748–1836; b. Lyon; d. Paris; nephew of Antoine de J. At the age of 17, he began his botanical studies under his uncle Bernard de J., and, four years later, was nominated demonstrator and assistant to Lemonnier, prof. of botany in the Jardin du Roi. He at once began to reform the arrangement of the gardens and collections of plants under his charge, and to apply to them his own and his uncle's ideas in regard to the natural method. For 30 years he developed his novel views; and when his *Genera Plantarum*, which he began 1778, was completed 1789, the natural system was finally established as the true basis of botany (see **BOTANY**). In 1793, he became prof. of botany in the newly organized Jardin des Plantes, where he continued to teach till 1826, when blindness compelled him to resign his chair to his son Adrien. During his tenure of office, he founded the library of the Museum, one of the best in Europe. His papers in the *Annales du Museum* (1804–20), and his articles in the *Dictionnaire des Sciences Naturelles*, are of great value.

ADRIEN (LAURENT HENRI) DE J., 1797, Dec. 23—1853, June 29; b. Paris; son of Antoine Laurent de J.

JUST—JUSTE MILIEU.

On taking the degree M.D. 1824, he presented as his thesis a memoir on the family of the *Euphorbiaceæ*, which attracted the attention of all botanists. His subsequent papers on the *Rutaceæ*, *Meliaceæ*, and *Malpighiaceæ*, also were noticeable. His memoir on the embryo of the *Monocotyledons* is a work of great merit. He was prevented by lack of health, from extending his *Cours Élémentaire de Botanique* (1848) into a complete and general treatise. In 1831, he was elected a member of the Acad., and, shortly before his death, he was nominated to the presidency of that body. J. contributed many valuable papers to *Annales du Museum*, *Comptes Rendus*, and *Dictionnaire Universel d'Histoire Naturelle*; but his influence as a lecturer was of even higher importance, and has been manifested by the number of able botanists of various nations who were trained by him.

JUST, a. *jüst* [F. *juste*, just, accurate—from L. *justus*, founded or resting on law, just—from *jus*, law, right: It. *giusto*]: that acts in accordance with the principles of law or justice; conformable to laws, human or divine; true; exactly proportioned; right; proper; righteous; upright; innocent; accurate; merited; deserved: AD. exactly; nicely; near or nearly; barely; almost. JUST'LY, ad. -li. JUST'NESS, n. exactness; accuracy. JUST NOW, the present moment; immediately; a very brief time ago.—SYN. of 'just, a.': incorrupt; equitable; honest; exact; nice; proper; fair; becoming; virtuous; pure; unforged; rightful; regular; orderly; impartial; normal; tasteful; in *OE.*, full;—of 'justness': justice; reasonableness; equity; propriety; correctness; fitness; uprightness.

JUST: a spelling of JOUST, which see.

JUSTE MILIEU, *zhüst-mē-lyé* [Fr. the *just mean*]: phrase, denoting according to the common expression, the *golden mean*. After the revolution of 1830, this term acquired a political signification, and came into very frequent use, because of the declaration of the organs of Louis Philippe that the *juste milieu* was the only principle of government which could secure the welfare of France.

JUSTICE.

JUSTICE, n. *jūs'tis* [F. *justice*, uprightness—from L. *justitiā*—from *jus*, law, right]: conduct in accordance with law, human or divine; the giving to every one his due; merited punishment; impartiality; equity; one commissioned to hold courts and administer justice; a judge; a magistrate. **JUSTICESHIP**, n. the office or dignity of a justice. **CHIEF JUSTICE** (see **CHIEF**: **JUDICIARY**: **JUDGE**). **JUSTICE'S CLERK**, in *England*, an officer, generally a solicitor, appointed by justices of the peace in England to assist them in their duties. As the justices themselves are not trained lawyers, and yet are called to administer many branches of the law and construe acts of parliament, the justice's clerk is a person of much local influence, and in practical effect guides and controls the justices in legal matters under the form of advice. **JUSTICE OF THE PEACE**, magistrate in the inferior courts (see below). **LORD CHIEF-JUSTICE OF ENGLAND**, the highest common and statute law judge, chief judge of the queen's bench division of the high court of justice. **LORD JUSTICE-CLERK**, in *Scot.*, the second highest judge in point of rank. **LORD JUSTICE-GENERAL**, in *Scot.*, the highest judge, called also lord president of the court of session. **JUSTICE IN EYRE**, *ār* [*eyre*, a corruption of L. *it'in'ērē*, on the journey]: a judge in circuit.—**SYN.** of 'justice': law; honesty; rectitude; retribution; punishment; right; integrity.

JUS'TICE: one of the cardinal virtues of the ancients, and the name for a principal department of social and moral duty in all ages. Practically, J. is considered to be clear and definite; but theoretically, there have been great disputes as to its ultimate analysis and the source of its binding quality. It has been maintained very generally, that both the perception of what is just and unjust, and the powerful sentiment in favor of the one, and in opposition to the other, are intuitive in our nature, or make a part of that comprehensive intuition termed Conscience, or the Moral Sense. On the other hand, it has been held that utility, in other words, the general interests of mankind at large, is what determines J., and that the sentiment enforcing it grows out of a regard to those interests.

The supposed innateness of the sense of J. (not the most defensible term to indicate its instinctive origin) is encumbered with the objections that attend the hypothesis of innate notions generally, set forth by Locke in his *Essay on the Understanding* (see **ETHICS**). But the other view is not free from serious difficulties, of which the greatest is the universally felt contrast between the Just and the Expedient, or the simply useful. We are frequently called to sacrifice expediency to J., which seems to imply an obligation higher than the interests of mankind. *Fiat justitia, ruat cælum*—'Let justice be done, although the universe should collapse.' Whence arises this paramount obligation?

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law; J., therefore, requires us to respect each one's *equal rights*. Sometimes, however, we call the law itself unjust, in which case we sympathize even with disobedience to it. It is then supposed that there is some higher law that should have preference—e.g., the moral law. Thus, it is conceived by most men at the present day to be unjust to hold our fellow-creatures in slavery. Again, it is considered unjust to *break faith* with any one; in other words, promises and engagements must be fulfilled in order to do justice. It is unjust to show partiality in cases where all are equally entitled; thence, impartiality in public tribunals is of the very essence of justice. Nearly the same idea is expressed by the notion of *equality*. In all these cases, there are some definite individuals—one or more—considered to be possessed of a *right*, and to be wronged if that right is not fulfilled. But all these cases show J. only negatively; they show not justice but injustice, whence J. can be inferred by contrast. Herein lies the difference between J. and Beneficence or generosity, this last being the mere overflowing of our disinterested fellow-feeling, which no one can claim as a right, and for whose neglect we are not punished.

These particulars, which are among the most commonly noted instances of the property in question, do not suggest any qualities present in all just actions, and absent in the opposite, except the existence of a so-called right on the part of somebody, and also the sentiment which demands the punishment of those that violate such right. We are no nearer the solution of the original question, which is, Why should these rights be either determined or enforced on any other ground than expediency, or the well-being of mankind? It is admitted on all hands that the just and the expedient concur in the long-run, but yet people demur to making expediency the basis or ground of justice. It seems to be natural for man to seek for J. a deeper *ground* than is supplied by so shifting, variable, and often superficial an element as expediency. It may be a very helpful guide in the application of J., and yet not be the foundation of the august obligation that gives J. its claim on men. It is felt that the foundation of J. is the same essentially as the foundation of moral obligation; and it is felt further that this foundation, to be secure and abiding, must be somewhat eternal and immutable. Hence, while the utilitarian theory of J. is evidently true in a limited range, and capable of a multitude of serviceable applications in practice, it seems unlikely ever to establish its claim to furnish man with the whole account of the reason or basis of the J. which man instinctively feels to be his duty.

Moreover, turning our thought to another department, it remains to be shown—as it is so often assumed—that J. is in its essence, and in the last analysis, distinct from *Love* or universal good-will. As it is manifested in human actions, it is concerned indeed with rights and claims much more than with love: this may be supposed the initial form, the first and lowest lesson of Justice. For its

JUSTICE OF THE PEACE.

highest and complete form, we must look to man's conception of it as manifested in God; and when J. is considered in that divine sphere, it loses its whole essence of beauty and of power if it be thought of as excluding love—indeed if it be thought of in any other wise than as actuated by love as by a life, and as being one of the grand departments in which love naturally develops its activity. And even for man, it will be conceded—even by those who see no proof of 'the Living God' whom Jesus Christ reveals—that there is no ideal of a *just* human character higher than the obedience to the law of universal *love* announced by Christ.

There is a *legal J.* which has an important sphere, because in its continually rising grades, it is the truthful expression and the indispensable instrument of so much of J. as man can embody and organize in his laws from time to time. It is this necessarily mutable J., this J. of the present expediency and utility, that needs to assign reasons for its existence and action. But the true essential J.—that character of righteous action toward all beings which consists in universal love or good-will—neither requires a basis, nor a reason, nor can be traced (except verbally) to any basis or reason outside of itself: it is its own foundation and its own reason. As an activity it is traceable directly to God, but when found in him it is found as an essential element in our thought of his eternal being.

There is such a thing as intuitive, eternal, and immutable justice; but it is not out of relation to the concerns of this world, and it is correspondent with the highest interests of mankind; and its variable apprehension by man renders no less clear and unambiguous the fact of its existence.—For some further suggestions, see ETHICS.

JUS'TICE OF THE PEACE: inferior magistrate having a local jurisdiction in minor cases civil or criminal. In some states they are commissioned by the executive; in others they are elected by the people. Their functions vary, but are usually carefully defined by the statutes in each state.

The institution of justices of the peace is very ancient in England whence it was transferred with some modifications to this country. Previous to 1327, there were conservators of the peace in every county chosen by the freeholders out of the principal men of the county to perform similar duties, but by a statute of Edward III., a change took place in the practice, and ever since the election of justices has been taken from the people, and exercised by the crown. At first, however, they were still called merely conservators or keepers of the peace, and were not dignified with their present title. Gradually the office grew more important, in consequence of many statutes adding to their duties and jurisdiction, until in the 30th year of the reign of Elizabeth, the form of commission was revised, and was settled nearly as now used. The appointment of a justice of the peace has always stood high in popular estimation, and is eagerly sought after by men of station, especially in the rural districts.

JUSTICES—JUSTICIARY.

The functions of justices of the peace in the United States are multifarious, and are either administrative or judicial. Thus in carrying out the provisions of the poor-law, if the parish officers require to remove a pauper from one parish to another, instead of intrusting this power to these officers, they are required to go before justices of the peace, so as to show the circumstances under which the removal takes place, and to satisfy the justices that the statutes on the subject have been complied with. But their great and distinguishing functions involve their power by summary action to prevent breaches of the peace, and concern also their judicial decision of what are called offenses punishable by means of summary convictions or orders. The theory on which all this jurisdiction is founded is, that while the graver crimes must be left to the ordinary remedy of an indictment, and the slighter wrongs to that of an action at law, there are many intermediate offenses not worthy of the solemnity of an indictment, nor yet fit to be left to the slow, expensive, and often elusory result of a civil action. Hence this intermediate class of cases arises, which justices can punish by fine and imprisonment swiftly and decisively. In like manner, justices punish personal assaults, vagrancy offenses, etc. Another important class of duties consists in the preparatory proceedings of all criminal trials; e.g. issuing warrants to arrest, and examining witnesses to see if there is a *prima facie* ground of suspicion sufficient to warrant the committal of such persons to be tried before juries—holding them to bail or in default of bail committing them to jail. Their function in such cases has some analogy to that of a grand jury.

JUSTICES, LORDS, in England: persons occasionally appointed by the sovereign, from the times of the Norman and Plantagenet kings, to act as his substitutes in the supreme government during his absence from the kingdom. Subsequent to the Revolution, these appointments have been made by letters-patent under the great seal, and the authority of parliament has sometimes been required in confirmation of their powers. On none of the absences of her present majesty from her kingdom has there been any delegation of the royal authority; and on one of these occasions, Lord Chancellor Lyndhurst stated in the house of lords that the law officers regarded it unnecessary to appoint lords justices, in which opinion he concurred. In case of the sovereign's minority, a regency has generally been resorted to. The powers of lords justices have been usually limited in the matter of pardoning and reprieving criminals, summons or prorogation of parliament, the disposal of public moneys in the treasury, and of church preferment in the gift of the crown.—Lords justices have sometimes been appointed to carry on the government of Ireland instead of a viceroy; in modern times, this has been done only during occasional absences of the lord-lieutenant, or in the interval between the demise of one lord-lieutenant and the appointment of his successor.

JUSTICIARY, n. *jüs-tish'î-ër-î*, also **JUSTICIAR**, n. *-î-ër* [*F. justicier*, a judge—from mid. L. *justiciarius*]; in *Scot.*,

JUSTIFICATION.

an administrator of justice; a chief justice. JUSTICIARY COURT, in *Scot.*, the highest criminal court. Its judges are seven of the judges of the court of sessions—viz., the lords president, justice clerk, and five others appointed by patent. The quorum of the high court consists of three judges. It sits usually in Edinburgh, but also holds circuit-courts thrice a year in some of the largest towns, and six times in Glasgow, the kingdom being divided for that purpose into three divisions or circuits. The jurisdiction embraces all crimes whatever; and it is an appellate court as regards inferior criminal tribunals. Its decisions are final, there being no appeal to the house of lords.

JUSTIFICA'TION, one of the most common terms of technical theology. In Protestant theology of the Calvinist type, it expresses an act of the grace of God whereby a sinner is absolved from the penalty of his sins, and accepted as righteous, not on account of anything in himself, but on account of the righteousness of Christ imputed to him. According to this view it is a purely forensic act—the act of a judge sitting in the forum, or place of judgment, and acquitting the condemned by an exercise of clemency, in consideration of the merits of another, who has paid the penalty which was justly his due. In this forensic sense of the word the apostle is understood by Protestants to speak (Rom. iii. 26) of God as 'the justifier of him who believeth in Jesus.' But in some minds the question arises whether such a merely legal or judicial aspect suffices to present God in his activity toward men. They decline to adopt as full statement of the doctrine what they claim to have been only an illustration in the argument of Paul. Thus a modified form of the doctrine, advocated as more in accordance with the general teaching of the New Testament, is that J. is God's dealing with sinful man as if man were just or righteous in the sight of God—this dealing being according to the eternal grace of God which is both wrought out and manifested in Christ Jesus.

In the doctrinal system of the Rom. Cath. Church, J. is considered not purely as a forensic act, or act of acquittal, but, further, as an infusion of personal righteousness, and as hence equivalent to what Protestants specially call *sanctification*. The distinction between the two things is in Prot. doctrine a cardinal distinction—the one being viewed as an *act*, the other as a *work*; the one proceeding from the divine clemency or grace once for all, the other from the progressive agency of the divine Spirit. A corresponding distinction is likewise found in the Rom. Cath. system between the *act of justification* and the *state, or condition of habitual justice*.

The fact of J. through faith in Christ is set forth most plainly in the Epistles of Paul, and it has appeared to some as if there were a discrepancy in this respect between these writings and the Epistle of James. The one says: 'For if Abraham were justified by works, he hath whereof to glory; but not before God. For what saith the Scripture? Abraham believed God, and it was counted unto him for

JUSTIFY—JUSTIN I.

righteousness.' The other says: 'Was not Abraham our father justified by works? Ye see then that by works a man is justified, and not by faith only.' The opposition in these statements is merely verbal, and needs no real reconciliation. It admits of a variety of verbal reconciliations: one is to suppose that Paul is describing the inward reality of J., which has no dependence on works, but only on faith, while James is speaking of its outward manifestation—of its reality as evinced in the Christian character and conduct, which necessarily expresses itself in good works, without which, in *this* sense, there can be no justification. J., in short, is independent of works in its origin and primary condition. Its origin is the grace of God—its only primary condition, acceptance of this grace, or *faith*. But it is dependent on works as its essential manifestation. Faith is not passive, but *active*; and a faith which is not active, which is not a spring of earnest Christian activity, is not a true faith. Such a faith cannot justify a man.

JUSTIFY, v. *jūs-tī-fī* [F. *justifier*, to justify—from mid. L. *justificāre*—from L. *justus*, just; *faciō*, I make]: to prove or show to be right or just; to vindicate as right; to pardon or clear from guilt; in *theol.*, to accept and treat as just or righteous for the sake of the merits of Christ Jesus; in *printing*, to form even or true lines of; to adjust; to conform exactly. JUS'TIFYING, imp.: ADJ. that has the quality of absolving from guilt. JUS'TIFIED, pp. *-fid.*: ADJ. treated as just or righteous. JUSTIFIABLE, a. *jūs-tī-fī-ā-bl* [F.—L.]: that may be justified; defensible by law or reason; excusable; warrantable. JUS'TIFIABLY, ad. *-blī*. JUS'TIFIABLENESS, n. *-bl-nēs*, the quality or possibility of being defended or vindicated. JUS'TIFIER, n. one who justifies; one who frees from sin or guilt by pardon. JUS'TIFICA'TION, n. *-fī-kā-shūn* [F.—L.]: a plea of sufficient reason; vindication; defense: in *law*, the defense in an action for libel or slander, in which it is acknowledged that the libel as charged was made, but is averred that the facts stated were true: see LIBEL. In *theol.*, deliverance by pardon from past sins; the treating of sinful man as if he were just or righteous in the sight of God, according to the eternal grace of God which is both wrought out and manifested in Christ Jesus. JUS'TIFICA'TORY, a. *-kā-tēr-ī*, tending to justify; vindicatory. JUSTIFIABLE HOMICIDE, in *law*, the killing of a human being by another without incurring legal guilt; e.g., the hanging by the proper official of a criminal duly sentenced; or any killing in self-defense or to preserve one's own life.—SYN. of 'justifiable': defensible; vindicable;—of 'justify': to absolve; maintain; defend; vindicate; excuse; exculpate; warrant; clear; pardon.

JUSTIN, *jūs-tīn* (JUSTINUS, *jūs-tī-nūs*) I., or JUSTIN THE ELDER: Roman Emperor of the East: 450–527, Aug. 1 (reigned 518–527); b. in Dacia, of barbarian parents. He entered as a private into the emperor's body-guard, of which he rose to be commander. He held this last post till

JUSTIN II.—JUSTIN.

the death of Anastasius I., whom he succeeded on the throne. Feeling that, from his total lack of learning, he was unfitted to direct the internal civil administration, he wisely assigned this duty to the quæstor Proclus, whose administration gave general satisfaction. In 519, he entered into an arrangement with the pope, which resulted in a cessation of hostilities between the Greek and Latin churches. In 523, he resigned to Theodoric, King of Italy, the right—which till this time the eastern emperors had always exercised—of appointing 'consuls' in Rome; and the same year he became involved in a war with the king of Persia. Some time before his death, he associated his nephew Justinian (q.v.) with himself in the government.

JUS'TIN (JUSTI'NUS) II., or JUSTIN THE YOUNGER: Roman Emperor of the East: d. 578 (reigned 565-578); nephew and successor of Justinian I. He espoused Sophia, niece of Empress Theodora, a beautiful and able, but revengeful woman. His rule was weak and despicable. Through the influence of the empress, Narses (q.v.) was dismissed from the exarchy of Ravenna, though at the time J. was fully aware that the Longobards were meditating an invasion of Italy. The joy of these savages, on hearing of the disgrace of the one man whom they dreaded was excessive; and in 568 they burst like an avalanche upon Italy, which from this time was forever lost to the Greek Empire. In the midst of a disastrous war with Khosrû, King of Persia, J. died, after appointing Tiberius, one of his generals, as his successor. J. had been insane from 574, from which time till his death the supreme authority was in the hands of the empress.

JUS'TIN (sometimes JUSTINUS FRONTINUS or M. JUNIANUS JUSTINUS): Roman historian who lived at some time before the 5th c., and probably in the 3d or 4th c., though some assign him an earlier date. His History—of great value as our only authority on many important points—if merely a selection of passages from the *Universal History* of Trogus Pompeius, a work now lost.

JUS'TIN, or JUSTI'NUS (MARTYR; also the APOLOGIST, sometimes the PHILOSOPHER): one of the Fathers, and, after Tertullian, the most distinguished apologist of the Christian Church: b. prob. near the beginning of the 2d c.; martyred between 148 and 165; native of Flavia Neapolis, a Roman city erected on the site of the ancient Sechem, in Samaria. His father Priscus was a heathen, and J. was educated in the religion of his father. He became an ardent student of the philosophy of his age, beginning with the school of the Stoics, but finally adhering to that of the Platonists. With the last, as he himself relates, he was at first highly satisfied; but, as he was one day wandering along the sea-shore, he encountered a man of mild and venerable aspect, who created in J.'s mind a desire for higher knowledge than Plato had reached, referring him to the study of the Jewish prophets, and through them to the great Christian teacher whom they foretold. The result was his conversion to Christianity, at some date between 119 and 140. After

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his conversion, he retained the garb of a philosopher, but, as a Christian philosopher, he strove by his writings and his instructions to bring others to the truth which he had himself discovered. He is said to have been beheaded in the reign of Marcus Aurelius, because he refused to offer sacrifice to the heathen gods. His death is attributed by the ancients to the enmity and malignant arts of the Cynic philosopher Crescens. The works of J., though not very voluminous, are highly interesting and important. They are not those of a scientific theologian, building up a definite system of philosophical doctrine. The key-note of his theology is that Jesus is the Christ, the Son of the Living God. J. centres all creed, as well as all practice and Christian sentiment, on this grand and vital fact. Yet his early Platonic training gave a noticeable tinge to some departments of his thought. The books ascribed to him with certainty are two *Apologies for the Christians*, the first addressed 'to Antoninus Pius' (emperor), the second 'to the senate;' a *Dialogue with Trypho the Jew*, which professes to be the record of an actual discussion at Ephesus. The *Address to the Greeks* is no longer deemed genuine. The *Exhortation to the Greeks*, the *Letter to Diognetus*, and a work *On the Monarchy of God*, an argument against the polytheism of paganism, and other works once ascribed to J., are certainly spurious. The first ed. of his works is that of Robert Stephens (Paris 1551). The Benedictine edition of J., by Maran, appeared, 1742; and Otto's—the best—at Jena, 1842-46. See Semisch's Monograph (1842) and Aubé's (Paris 1874) on Justinus.

JUSTINIAN, *jūs-tīn'ī-an*, or JUSTINIANUS, *-tīn-ī-ā'nūs*, I., FLAVIUS ANICIUS (THE GREAT), Emperor of the Eastern Roman Empire: 483-565, Nov. 14 (reigned 527-565) b. in the village of Tauresium, which afterward grew into the splendid city of Justiniana, site of the modern Kustendje. Although of obscure parentage, he shared the success of his maternal uncle, Emperor Justin, being invited at an early age to Constantinople, where he received a careful education, and if the reports of his courtly biographers can be accepted, attained considerable eminence in philosophy, theology, and law, as well as in the more elegant pursuits of poetry, music, and architecture. When his uncle was elevated to the purple, 518, he appointed J. commander-in-chief of the army of Asia. The tastes of J., however, inclining him rather to civic pursuits, he declined this appointment, and remained attached to the court of Constantinople. In 521, he was named consul, and during the remaining years of the reign of his uncle, he continued to exercise great influence. In 527, Emperor Justin, by the advice of the senate, proclaimed him his partner in the empire. Justin survived the step but a few months, and J. as sole emperor, was crowned, with his wife, the famous Theodora, whom, despite of her more than dubious antecedents as an actress, he had raised to the position of his wife. J., on his accession, was in his 45th year. His reign, which extends over 38 years, is the most brilliant in the history of the late empire. Although himself without

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the taste or the capacity for military command, he had the fortune or the skill to select the ablest generals of the last days of Roman military ascendancy. Under the direction of his generals, and especially of the celebrated Narses (q.v.) and Belisarius (q.v.), his reign may be said to have restored the Roman Empire, at least in outward appearance, to its ancient limits, and to have reunited the East and West under a single rule. In his first war—that with Persia—he concluded a treaty by which the crisis that had long threatened was at least warded off; but the rejoicings which celebrated its termination had almost proved fatal, by a domestic revolution, to the authority of J. himself. A conflict of the so-called Blue and Green factions in the circus in 532 was but an outburst of political discontent, which went so far as to elect a rival emperor, Hypatius. J. himself was struck with dismay, and had made preparations for flight; but the vigor and determination of Theodora arrested the revolt. Narses, with a relentless hand, repressed the tumults, 30,000 victims having, it is said, fallen in a single day. By the arms of Belisarius, the Vandal kingdom in Africa was re-annexed to the empire; and the same general, conjointly with Narses, restored the imperial authority as well in Rome as in n. Italy and a large portion of Spain. One of the most extraordinary, though in the end ineffective, works of the reign of J. was the vast line of fortifications which he constructed, or renewed and strengthened, along the e. and s.e. frontier of his empire. These works of defense, and the construction of many public buildings both in his capital and in other cities of the empire, involved an enormous expenditure, and the fiscal administration of J., in consequence, pressed heavily on the public resources; but it is admitted to have been ably and uprightly conducted. It is, however, as a legislator chiefly that J. has gained renown. Immediately on his accession, he set himself to collect all legislative enactments still in force; and to do this thoroughly, he first compiled a *code*, which comprised all the constitutions of his predecessors (527–529): see CODE. The authoritative commentaries of the jurists were next harmonized, and published under the title *Digesta Pandecta* (529–533): see PANDECTS. The code was republished 534, with the addition of J.'s own constitutions. His third great legal undertaking was the composition of a systematic treatise on the laws, for the guidance of students and lawyers. This was published a short time before the *Digest*, under the title of *Institutiones*, i.e., 'Institutes.' All these works were accomplished under careful superintendence and direction of Tribonian, and were originally in Latin. The later treatises which J. caused to be written were in Greek, and were entitled *Novellæ*, i.e., 'New Works.'

The character of J. as a ruler contrasts favorably with that of most of the emperors, whether of the earlier or the later empire. His personal virtues were of a class and in a degree seldom united in one of such station; and his public administration, with the single exception of that of ecclesiastical affairs, in which he was an arbitrary and im-

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perious intermeddler, evinces great ability, and just and upright intentions. His intermeddling with the church consisted chiefly in his attempts to conciliate various heretical sects, sometimes by framing a compromise in doctrines; or, if failing thus to secure uniformity in doctrine, then seeking to compel it by persecutions more or less severe, for dissentients. J. was himself a student of theology and a writer on controverted points; yet he seems to have held strangely varying opinions.

JUSTINIAN II., surnamed RHINOTMETUS, Emperor of the Eastern Roman Empire: 669-711, Dec. (reigned 685-95, 704-11); b. Constantinople; son of Constantine IV. He succeeded his father when 16 years old, made a truce with the Arabs which gave them a command over Asia Minor, was defeated by the Bulgarians 688, and by his bloody persecution of the Manichæans and extreme extortion of the means of gratifying his sumptuous tastes drove his subjects into rebellion. In 695 they rose, seized him cut off his nose, and banished him to Cherson in the Crimea. He escaped 704, secured an army of 15,000 Bulgarians, seized Constantinople, massacred his rivals and thousands of their adherents, provoked a second rebellion by his cruelty and rapacity, and was assassinated in Asia Minor.

JUSTLE, v. *jūs'l* [see JOSTLE]: to rush against each other: to push; to drive: N. a shock; a slight encounter. JUSTLING, imp. *jūs'ling*. JUSTLED, pp. *jūs'ld*: N. the act of striking another with a slight shock.

JUSTLY, JUSTNESS: see under JUST.

JUT, v. *jūt* [another spelling of JET: F. *jeter*, to cast, to throw—from L. *jactāre*, to throw]: to project beyond the main body; to run against. JUTTING, imp.: ADJ. shooting out; prominent. JUT'TED, pp. JUT'TINGLY, ad. -ly. JUT-WINDOW, a window that projects from the line of a building.

JUTE.

JUTE, n. *jüt*: fibre of a plant common in Bengal—also the plant itself. The fibre is produced from two species of *Tiliaceæ*, the *Corchorus olitorius* and *Corchorus capsularis*, two plants alike in qualities, though slightly different in appearance, and sown indiscriminately; the first having round seed-pods and reddish stalk, the latter long seed-pods and bright green stalk. From the fibre which is the cheapest known are produced gunnies, gunny-cloth and cordage, and from the finer qualities carpets, shirting, coat-linings, etc., are made. It is extensively used for mixing with silk, cotton, and woolen fabrics, and also in paper-making, while the leaves are eaten in many places as food.

Although indigenous to the tropics, Bengal being the largest jute-growing country, the plant grows in most climates and on all kinds of soil, rich alluvial lands, and lands subject to salt-water tidal influences particularly favoring its production. It is an exhausting crop for the soil. The plant, if weeded once, requires no more attention till cutting time. It grows to a height of 12 ft., having a single stalk without branches or leaves till near the top, and will flourish though flooded with two ft. of water for a month at a time. In Bengal, the plant is cut while in flower, about three months after sowing. Cut close to the ground, stripped of leaves and branches, it is tied in bundles and steeped 10 to 20 days in water, to loosen the fibre by rotting the outer bark. After steeping, the plant is beaten till the fibre only remains, which is cleaned, dried, and made into 'drums' of 70 or 80 lbs. If for exportation, it is pressed into bales of 300 lbs. and more. Fine J. has a beautiful glossy golden appearance, and is soft and silky to the touch. Great importance attaches to length and strength of fibre.

The first mention of the word J. is in 1796, in the manuscript commercial index of the court of directors of the E. India Company. It is the Bengali name used by the natives of Cuttack and Balasore, where the first European manufactories were established in the middle of last century. In 1829, the total export from Calcutta was 20 tons, value £60. In 1833 it had increased sixteenfold, and about 1864-5 the increased demand caused J. cultivation to extend to other districts, the exportation from British India, Bengal, and Burmah reaching (1880), 4,626,710 cwts., value £4,009,491.

England, Bombay, and the United States originally divided the exports of J. and till the war of secession, N. America took the largest share of the gunnies (see GUNNY BAGS). J. and gunnies are now exported from Bengal largely to France, Australia, and other parts of the world. J. grown in England is not remunerative. It has been successfully grown in small quantities in the southern United States.

Gunnies are classed as Nos. 1, 2, and 3. No. 1, thick and close woven, is used as bagging for sugar, fine grains such as linseed or rape-seed, and similar products; No. 2, also close woven, but thinner, for rice and the larger

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- grains; No. 3, thick, coarse, and open, is principally suited for the outer covering of double bags. The manufacture of gunny with primitive looms is a common form of convict labor in Bengal. Near the Himalayas, in n.e. Bengal the natives wear a fine cloth of their own manufacture, made of J. or J. and cotton.

Increased demand has lately induced J. production in Burmah, Italy, Queensland, and the United States, etc.; and a European company has been started to cultivate J. in British Burmah on a large scale. The manufacture is extensive in Great Britain, and is the chief industry of Dundee and Belfast. In Bengal, J. valued at about \$5,000,000 is annually manufactured, mostly for local consumption. It is made chiefly by the English mills, of which there are several near Calcutta, employing thousands of hands, the Gauripore and Barnagore mills being the principal. Additional mills on a large scale are being erected, so that it remains to be seen whether the advantages of locality and cheap labor in India, over enterprise, cheap machinery, and established trade at Dundee and Belfast, will cause the present supremacy of the latter places to wane.

In Bengal coarse paper has for centuries been made from J. by beating the fibre into a pulp with lime, drying it in sheets, sizing with rice starch, and polishing with a stone or shell.

New Zealand flax (*Formium tenax*) is a rival fibre. Rhea or China grass (*Urtica tenacissimus*), which grows wild in rank luxuriance in the tropics, is so fine and strong as to rival silk, but there is great difficulty in separating the fibre from the wood and bark. The E. Indian government offer £5,000 for a cheap invention for this purpose; and till this is discovered, Bengal J. is likely to maintain its supremacy among the cheap fibres of the world.

This now gigantic industry has sprung up so rapidly that comparatively few persons are aware of its importance, and many have never even heard of the fibre. For 40 years, the Dundee mill-owners have been gradually employing it more and more to mix with flax, until there is scarcely one of them who does not use it largely, and the majority now use it entirely. J. is more brittle than flax, and will not spin so fine, nor wear so well, but it is of only about half the price, and when woven, is attractive enough in appearance.

J. of a fine glossy appearance brings the highest price in the market. It is spun by processes similiar to those employed for flax, but as it is 10 to 15 ft. long, it must be cut into 3 ft. lengths before it can be heckled. The fibre requires also to be saturated with whale-oil and water to soften and render it more elastic, preparatory to spinning. Heckling is the first of the spinning operations, and its object is to remove the coarser portions of the J., and lay the fibres in parallel order. The heckle is a kind of comb, with sharp-pointed steel teeth, one to two inches in length. Formerly, the process was by hand, now by heckling-machines. The heckled stricks are next taken to the

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spreader, or first drawing-frame, where they are spread upon an endless creeping-sheet, to supply the J. continuously to another part of the machine, where, by a peculiar arrangement of rollers, it is drawn out, through combs of closely-ranged steel pins, into a continuous ribbon, called a *sliver*. A number—say, 14—of these slivers are then taken to another drawing-machine, with steel combs, and drawn out into one. In like manner, some 20 of these combined slivers are again drawn into one. The first sliver from the spreader has thus been drawn out about 280 times its original length; and by continuing this



Jute (*Corchoras capsularis*):
a. capsule; b. flower.

doubling and drawing, the fibres become thoroughly parallel and equalized. The sliver from the last drawing-frame is still further drawn out, and at the same time receives a slight twist in the roving-frame. Finally, the bobbins of 'rove' are taken to the spinning-frame, and spun into yarn on the 'throstle' principle.

As in the case of flax, the J. tow from the heckling process is also spun into yarn, in which case it is first carded by means of a 'breaker' and 'finisher' card, and then *drawn*, *roved*, and *spun*, as above described. Indeed, much J., as imported, is treated in this way without being heckled at all.

The larger portion of J. fabrics is woven from yarn of the natural color; but for some purposes it is bleached; and when used for carpets, it is dyed various colors. It bleaches with difficulty, but is easily dyed. Hessian

JUTE—JUTLAND.

sleetings for packing all kinds of merchandise are most largely produced; but sackings, baggings, osnaburgs, ducks, carpetings, mattings, etc., are largely made as well. It is also intermixed with flax, cotton, and wool for various union fabrics. There has been difficulty in rendering the dyes on this material fast; but at Barrow-in-Furness, England, where it is manufactured on a considerable scale, a process for permanent dyeing of the fibre is in successful operation. As a result of this, a finer class of J. goods, e.g., curtains, table-cloths, and dress-pieces are now made, to which the general name of *Kalameit* is given.

A few years ago, several J. mills were started in Calcutta. These have been so prosperous that they now supply nearly all the heavy sacking and bagging for the Egyptian and Australian markets. Much of this material is also sent from India to California. Dundee, Scotland, is still, however, the great centre of the trade; and there the consumption of the raw material, which in 1836 was only 300 tons, amounted 1873 to 140,000 tons; though the trade has since fallen off a little. One of the mills there occupies 22 acres of ground, has more than 1,000 power-looms, and employs 5,000 hands. The total quantity of J. imported into Great Britain 1880 was 4,638,896 cwts., valued at £4,018,800. After opium, J. now forms the next great staple of the maritime trade of Calcutta, which exports J. to the value of about \$22,500,000 annually.

The large and increasing demand for J. in the United States, where it has long been used as a covering for cotton bales and for other bagging purposes, has led to successful attempts to acclimatize the plant in portions of the s. states approximating the conditions under which it thrives in India. In 1880 there were 27 establishments engaged in manufacturing flax, hemp, and J. bagging, using a capital of \$2,491,500, employing 3,209 hands, paying in wages \$827,759, using material worth \$2,058,017, and yielding products valued at \$3,511,653. For other J. manufactures there were 4 establishments, capital \$415,000, with 525 hands, wages \$141,979, materials \$447,094, and products worth \$696,982. In 1889 the value of J. manufactures from imported and domestic stock was estimated at about \$5,000,000.

JUTE, n. *jót*: a native of Jutland in Denmark; probably only another form of *Goth*. *Jutland* was known in England as *Gotland*.

JÜTERBOGK, *yü'tér-bök* or JÜTERBOG, or JUTERBOCK: small manufacturing town of Prussia, province of Brandenburg, on the Nuthe, 27 m. s. of Potsdam. Here considerable wool and flax markets are held, and some wine is produced. Woollen-cloth manufactures, spinning, weaving, and dyeing are carried on. Near J. is the field of Dennewitz, where the Prussians defeated the French under Ney and Oudinot, 1813, Sep. 6. Pop. of J. (1880) 6,955.

JUTLAND, *jüt'land* (Dan. *Jylland*): only considerable peninsula of Europe that points directly n.; a portion of

JUTTY—JUVENAL.

the kingdom of Denmark. It formerly comprised the province of N. Jutland and the duchy of Slesvig (q.v.), called by the Danes S. Jutland. The province of N. Jutland has 9,709 sq. m.; pop. (1880) 868,511; see DENMARK. J. is said to have been inhabited in the earliest times by the Cimbri (q.v.), and from this circumstance it has received the name of the Cimbrian Peninsula, or Chersonesus. In historical times, we find it inhabited by the Jutes, who took part in the expedition of the Saxons to England. As allies of the Saxons, they waged war with Charlemagne, and under the names Normans (Northmen), frequently desolated the coast of Germany and France.

JUTTY, *v. jüt'ti* [see JUT]: in *OE.*, to shoot out beyond anything: *N.* the part of a building which shoots out beyond the rest; a pier or mole projecting into the sea—also called a **JETTY**. **JUTTYING**, *imp.* **JUTTIED**, *pp.* *jüt'tid.*

JUVENAL, *jô've-nal* (DECIMUS JUNIUS JUVENALIS, *jô-vē-nā'lis*): Roman satirist: was born at the Volscian town of Aquinum. The year of his birth is unknown; but it may be taken for granted that he was a youth in the reign of Nero; that he was come to man's estate, and was writing in the reign of Domitian (81-96); and that he survived into the times of Hadrian (117-138). He seems to have possessed a competence. He practiced at Rome as an advocate; and there are some reasons for supposing that he visited Egypt. Among his friends were Martial and Statius, and perhaps Quintilian. But nothing is known of his personal history except a few leading facts—among them, that he recited some of his satires in public with much applause; and even these facts are not known to us in any detail. His interest for posterity depends altogether on his writings—on his 16 satires, still surviving, which are in the first rank in satirical literature, and of priceless value as pictures of the Roman life of the empire. J. and Horace respectively represent the two schools into which satire has always been divided; and from one or other of them every classical satirist of modern Europe derives his descent. As Horace is the satirist of Ridicule, so J. is the satirist of Indignation. J. is not a man of the world so much as a reformer, and in Roman literature he acts a part corresponding in strong denunciation of evil (though not in presentation of holiness or in any hopeful urgency toward repentance) to that of the prophets under the Jewish dispensation. He uses satire not as a branch of comedy, which it was to Horace, but as an engine for attacking the brutalities of tyranny, the corruptions of life and taste, the crimes, the follies, and the frenzies of a degenerate society. He has great humor of a scornful, austere, but singularly pungent kind, and many flashes of a high moral poetry. We would especially point out that the old *Roman* genius—as distinct from the more cosmopolitan talent formed by Greek culture—is distinctly discernible in Juvenal. He is as national as the English Hogarth, who perhaps gives a better image of his sort of faculty than any single English humorist or

JUVENALIA—JUVENILE OFFENDERS.

moralist that we could name. J. has been better translated in our literature than almost any other of the ancients. Dryden's versions of five of his satires are among the best things Dryden ever did. Dr. Johnson imitated two of the most famous in his *London* and *Vanity of Human Wishes*; and the version of the whole of them by Gifford is full of power and character. The best known modern edition of J. is that of Rupert, and there are good recent English ones by Maclean and Mayor.

JUVENALIA, n. *jó-vên-â-lî-a* [L.]: in *Rom. antiq.*, games for young people, instituted by Nero.

JUVENESCENT, a. *jó-vê-nês-sênt* [L. *jûvênes'cens* and *jûvênesceu'tem*, growing or becoming young again—from *jûvênis*, young]: growing young JUVENESCENCE, n. -sêns, a growing young.

JUVENILE, a. *jó-vê-nîl* [F. *juvénile*—from L. *jûvênîlis*, youthful—from L. *jûvênis*, young]: young; youthful; suited to youth: N. *familiarly*, a young boy or girl. JUVENILITY, n. -nîl'î-tî, youthfulness; the manners or customs of youth.—SYN. of 'juvenile': puerile; boyish; childish.

JUVENILE OFFENDERS, SCHOOLS FOR: institutions for offenders of tender age, in which they may be separated from adult criminals, and subjected to different punishment and reformatory treatment.

John Howard's efforts to ameliorate the condition of English prisoners and improve the forms of prison construction and management, induced members of the Soc. of Friends in London to organize a movement for the reformation of juvenile delinquents 1817, which culminated in the erection of the first house of refuge for such children. In the following year Friends in New York, impressed with the necessity for similar efforts in the United States, and satisfied from correspondence with the Friends in London of the practicability of the new system, organized the Soc. for the Prevention of Pauperism. They worked under this name several years, the field constantly widening and presenting new features for serious consideration. It became apparent that the real reform should begin with children of natural or acquired vicious habits, before they were subjected to the hardening influences of penal confinement. The suggestions of Edward Livingston (q.v.) 1803, which he developed in his La. Code 1821, comprising a house of refuge, house of industry, and school of reform, seemed to promise the quickest and best results. Accordingly the soc. changed its name and was incorporated 1823 as 'The Soc. for the Reformation of Juvenile Delinquents.' This was the first American Soc. organized for this purpose, and the structure on Madison Square established 1824 was the first American house of refuge for children. The institution with its farm now occupies a large part of Randall's Island in the East river. From this beginning the system spread rapidly; similar institutions were opened in Boston, 1826; Philadelphia 1828; New Orleans 1847; Westborough, Mass. 1848; Cincinnati, R. I. ('Howard'), and Portland, Me., 1850;

JUVIA—JUXTAPOSITION.

New York (Juvenile Asylum), and Boston (House of Reformation), 1851; Lowell, Mass., 1852; Meriden, Conn., and N. Cambridge, Mass., 1853; Morganza, Penn., Lancaster, Mass., and St. Louis, Mo., 1854; Lansing, Mich., 1855; Manchester, N. H., 1857; San Francisco, 1859; Waukesia, Wis., 1860; Worcester, Mass., and Westchester, N. Y., 1863; Jamesburg, N. J., Vergennes, Vt., and Louisville, Ky., 1865; Baltimore, Md., Newport, Ky., and Palmer, Mass., 1866; Plainfield, Ind., Albany, N. Y., and St. Paul, Minn., 1868; Delaware, O., Washington, D. C., and Boston (Truant Home), 1869; Salem, Mass., 1870; Trenton, N. J., (for girls), 1871; Cheltenham, Md., 1872; Indianapolis, 1873; Lawrence, Mass., and Verona, N. J., 1874; Milwaukee, 1875; Elmira, N. Y., 1876; S. Evanston, Ill., and Boston (Marcella Street Home), 1877; Mitchellsville, Io., and New Bedford, 1878; Adrian, Mich., 1879; Golden, Colo., N. Topeka, Kan., and Kearny, Neb., 1881; Detroit, Mich., 1882; Carroll P. O., Md., and Utica, N. Y., 1886, Canaan Four Corners, N. Y., 1887.

In 1880 there were 55 institutions for juvenile offenders in the United States, with 11,340 inmates; 9,137 males, 2,203 females, 10,356 natives, 984 foreign, 10,102 white, 1,238 colored; and 1886-7, there were 56 institutions with 14,444 inmates; commitments that year 7,684; discharges, 7,677. The age limit for commitment varies; 2 institutions have no limit, 1 is limited to under 15 years, 8 to under 16; the lowest specified limit is 2-14, the highest 16-30, average 6-18.

JUVIA, n. *jó'vî-a*: the Brazil nut, fruit of *Bertholettia excelsa*, a tree 100 to 120 ft. high, in S. America.

JUXTAPOSITION, n. *jűks'tă-pō-zish'ăn* [L. *juxta*, near, and Eng. *position*]: a being placed near or by each other; contiguity.

K

K, or **k**, *kā*, eleventh letter of the English alphabet, a consonant: it has one invariable sound, *c* hard as in *cat*, *cot*, *cut*. In some words (e.g. *lock*) *k* following *c* serves merely to make unmistakable the hard sound of *c*. The *k* formerly added when *c* terminated a word (e.g. *publick*, *musick*), is now discarded. The Shemitic languages had two characters with the same or very similar consonantal power—one called in Hebrew *Kaph* (hollow of the hand), the other *Koph* (the hind head). Both were at first transplanted into the Greek [κ (*Kappa*) = **K**, φ (old Greek *Koppa*) = **Q**], and thence into Latin; but in Greek, *Koppa*, or *q*, was early dropped, and in Latin *Kappa*, or *k*, was supplanted by *c* (see ALPHABET, and letter C), except in the case of a few words, as *Kalendæ* and *Kæso*. In the languages derived from Latin, accordingly, *k* is used only in writing foreign words. Although unknown to the Anglo-Saxon alphabet, it has in modern English to a considerable extent taken the place of *c* in words of Saxon origin: see C. The character *Koppa*, or *q*, has been retained in modern alphabets, as it was in Latin, only in the combination *qu*. This is clearly a relic of the primitive nature of written characters, when they constituted syllabaries rather than alphabets, each character expressing a consonantal articulation followed by a particular vowel sound; so that there was one character for *ba*, and another for *bo*; one for *ka*, and another for *ko* or *ku*, as in hieroglyphs. *K* (*q*, or *c* hard) is the sharp mute of the guttural series, *k*, *g*, *ch*, *gh*: see LETTERS. For the interchanges of *k*, see C.

KAABA, n. *kā'ā-bā* or *kā-ā'bā* (see CAABA): oblong stone building within the great mosque of Mecca (q.v.). According to the legend, Adam worshipped on this spot first after his expulsion from Paradise, in a tent sent down from heaven for this purpose. Seth substituted for the tent a structure of clay and stone, which was, however, destroyed by the Deluge, but afterward rebuilt by Abraham and Ishmael. Certain it is that the building has stood from time immemorial, and served the Arabs before Mohammed as a place of idolatrous worship, probably to Zohal (Saturn). It is, as it now stands—rebuilt 1627—35 to 40 ft. high, 18 paces long, 14 broad. Its door, coated with silver, is opened only three times in the year—once for men, once for women, and once for the purpose of cleaning the interior. Next to this door, in the n.e. corner of the edifice, is set the famous lava-like Black Stone which, since the second year of the Hegira (q.v.), has served as Kibleh, i.e., as an indicator of the direction toward which all Moslems must turn in their prayers. This stone, said to have dropped

KAAMA—KADESH BARNEA.

from Paradise together with Adam, is held in extreme veneration, and one of its principal names is 'The Right Hand of God on Earth.' It was originally of white color, but the sins of mankind have caused it to shed so many silent tears, that it has become (externally) quite black. Others explain this change of color by the unnumbered kisses and touches bestowed upon it by the pilgrims, part of whose ceremonies (see HAJJ) consists in compassing the K. seven times, each time either kissing this stone, or touching it with the hand, and kissing the latter. A smaller stone, to which less veneration is shown, is set in the s.e. corner of the Kaaba. The outside of the K. is annually covered anew with the richest black silks, on which are embroidered sentences from the Koran in gold; a pious contribution first on the part of the caliphs, later of the sultans of Egypt, now of the Turkish emperors. The K. has a double roof, supported by pillars of aloe-wood, and it is said that no bird ever rests upon it. The whole edifice is surrounded by an inclosure of columns, outside which there are found three oratories, or places of devotion, for different sects; also the edifice containing the well Zem-Zem, the cupola of Abbas, and the Treasury. All these are further inclosed by a splendid colonnade, surmounted by cupolas, steeples, spires, crescents, all gilded and adorned with lamps, which nightly shed brilliant lustre. These surroundings, between which and the K. run seven paved causeways, were devised first by Omar, for better preservation of the K. itself.

KAAMA, or **CAAMA**, *ká'ma* (*Antilope Caama*): species of antelope, native of s. Africa, nearly allied to the *Bubalus* (q.v.) of n. Africa. It is the *Harte-beest* of the Dutch colonists of the Cape of Good Hope, where it is the most common of all the large antelopes. Its horns are rather short and thick, curved like the sides of a lyre. It inhabits plains and congregates in large herds. Its flesh is very good, more resembling beef than that of almost any other antelope. It is very capable of domestication.

KA'BA-NAGY, *kõh'bõh-nõdj*: small town of Hungary, in a plain 20 m. s.w. of Debreczin. Pop. (1880) 6,073.

KAB'BALAH: see **CABALA**.

KABELON, n. *kãb'ë-lõn* [Ger. *kabbelian*; Sw. *kabelgo*; Dan. *kabeljao*]: cabbage and potatoes mashed together; a dish of mashed cod; in *naut.*, codfish which has been salted and hung for a few days, but not thoroughly dried.

KABUL': see **CABUL**.

KABYLES, *kã-bêls'* (correctly **KABÁIL**: another name for the **BERBERS** (q.v.)).

KADESH BARNEA, *kã'dësh bãr'nê-a*: site of many important events in biblical history, whose exact location has been the subject of much controversy. It is variously spoken of in the Bible as being on the Chedorlaomer route from the wilderness of Paran to the n.; as the e. boundary of Abraham's possessions; as a city on the s. boundary of the Negeb; as having the fountain the 'Well of Judgment;' as being 11 days' journey from Mt. Sinai, as a suitable abode

KADIAK—KAFA.

for Israel, as the 3d station of the Israelites on their march from Sinai to Canaan; as the place where the people murmured and were turned back to wander nearly 38 years more in the desert where Moses smote the rock for water, where for his offense he was sentenced to die without entering Canaan, and where the Israelites re-assembled for their final march into the promised land. In 1838 Dr. Robinson located it at 'Ain-el-Weibeh, 10 m. n. of Mt. Hor. long. $35^{\circ} 30'$; 1842 the Rev. John Rowlands identified 'Ain Qadis with it, in an oasis 90 m. s. of Hebron; and 1881 Dr. Henry Clay Trumbull confirmed this identification. 'Ain Qadis is about 60 m. w. of 'Ain-el-Weibeh, long. $34^{\circ} 30'$.

KADIAK, *kád-yák'*, incorrectly written KODIAK: island s.e. of the peninsula of Alaska (q.v.) containing the oldest settlement in the territory as distinguished from the Aleutian archipelago. It is little better than an irregularly shaped mass of mountains, 75 m. by 50. The chief value of K. consists in the tolerable harbor of St. Paul, on its n. coast.

KADIAKS, *kád-yáks'*, or KONIA'GAS (Russ. KOLOSHES): aboriginal race in the n. part of Alaska, whose chief representatives are found in the island of Kadiak. There are several tribes. The race is widely scattered, but is small in numbers, and of low grade.

KADOM, *ká-dóm'*: town of Russia, govt. of Tambov. 140 m. n.n.e. of the town of Tambov, on the river Moshka. The houses are chiefly of wood, and the principal trade is in honey. Pop., mostly of Tartar descent (1880) 7,107.

KADUR, or CADOOR, *ká-dór'*: district in the native state of Mysore, India; bounded n. by Shimoga, e. by Chitaldrug, s. by Hassan, w. by the Bombay district of S. Kanara; lat. $13^{\circ} 12' - 13^{\circ} 58' \text{ n.}$, long. $75^{\circ} 8' - 76^{\circ} 25' \text{ e.}$: 2,294 sq. m. It is almost wholly a hilly country, with the Ghauts mountain chain on the w. frontier with two peaks 6,215 and 5,451 ft. high, and the Baba Budans range in the centre with a peak 6,317 ft. high. The plain country in the e. is fertile, well watered, and provided with numerous irrigation channels. The principal natural wealth of K. is in its great forests of the finest timber; iron is mined at the foot of the hills; corundum is found in several localities; fish, wild beasts, and game are abundant. Chikmagalur is the headquarters of the district, with pop. (1871) 2,027, but Tarikere was the largest town, pop. 5,302. Pop. of dist. (1871) 332,381, of whom Hindus 318,480.

KAF: see CAF.

KAFA, or KAFFA, *káf-fá*, or GO'MARA: country of e. Africa; s. of Abyssinia, w. of Somaui, between the basins of the Gobat and Juba rivers; near lat. 7° n. , long. $36^{\circ} 30' \text{ e.}$; 5,000 ft. above the sea. The country is governed by an absolute king who is said to be able to muster 10,000 horsemen at will; the people possess many of the characteristics of the Abyssinian, speak a language of the Hamitic group, profess a corrupt form of Christianity, and are

KAFFA—KAFFRARIA.

naturally warlike. The chief productions are coffee (here indigenous), *ensete*, the principal food, resembling the banana, palms, and cotton. K. was first visited by Europeans 1843.—Chief town Bonga, lat. 7° 12' 30" n., long. 36° 4' e., having pop. 6,000–7,000.

KAFFA, *káf'fâ*, or FEODOSIA, *fā-ō-dō'sē-â*: fortified town and seaport of s. Russia, govt of Taurida; picturesquely situated on the e. coast of the Crimea, 70 m. e. of Simferopol. The harbor, a portion of the bay of K., inlet of the Black Sea, is deep and safe. It contains a citadel, barracks, and a museum of antiquities collected chiefly in the vicinity; and though it has greatly declined, is still the seat of considerable trade. The principal exports are wheat, hides, sackcloth, and goats' hair. About 250 vessels (aggregate 45,194 tons) enter and clear the port annually. Pop. (1880) 8,482.

K., the ancient *Theodosia* or *Feodosia*, was in the 13th c., when it was under Genoese dominion, a centre of trade. In 1465, it fell into the hands of the Turks, under whom it had 100,000 inhabitants. In 1783, it was taken by the Russians, to whom it was ceded by the treaty of Jassy 1792.

KAFFER, or KAFIR, etc., n. [Ar. *kāfir*, infidel]: one of the race of Kafirs: ADJ. pertaining to the Kafirs (q.v.).

KAFFRARIA, BRITISH: region of s. Africa, between the Great Kei and the Keiskamma, wrested from the Kafirs by the Cape colonists in the war of 1846–7. It was for a time an independent colony, but is now a part of Cape Colony, and the old name is seldom used. It has 6,500 sq. miles; bounded n. by the Amatola Mountains (4,000 to 5,000 ft.), continuation of the Great Winterberg and Katberg ranges in the Cape Colony. It is well watered by the Keiskamma, Chumie, Buffalo, Gonubi, and minor streams or torrents, generally running in deep and rugged beds, and by the Great Kei, a considerable stream, dividing it from Kaffraria Proper. None of these are navigable. The physical aspect of British K. is similar to that of Lower Albany, or the east-coast region of the Cape Colony. Many fertile, well-watered valleys are among the spurs of the Amatola Mountains. Behind these mountains are high grassy plateaux, extending to the Kei river, well adapted for grazing and agriculture.

In 1859, British K. was divided into farms of from 1,000 to 3,000 acres, which were granted free on certain terms of settlement and defense. The principal town is King William's Town, headquarters of the military seat and government; pop. about 2,500. The port of British K. is East London, at the mouth of the Buffalo river, where there is good anchorage. There are numerous military posts and German villages along the line of the Buffalo from the sea to the mountains; also several mission-stations, Episc., Wesleyan, Presb., and German; and the natives are in numerous cases reclaimed from heathenism, and becoming an orderly and civilized population. In 1861, by her majesty's letters-patent, British K. was declared an inde-

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pendent colony, under a lieut. gov., the governor of the Cape being styled high commissioner. Its revenues were derived from quit-rents of the farms granted, and the revenue duties collected at the port of East London; and were about sufficient to pay the expenses of the limited executive. In 1865, British K. ceased to be an independent colony, and was annexed to Cape Colony.

The larger *fera natura* have nearly disappeared, though a few years ago the high plains n. of the Amatola, called the Bontebok Flat, were favorite hunting grounds of s. African sportsmen. A considerable number of the German Legion, sent here after the Crimean war, have received grants of land, and make excellent settlers. Two English, and one or two German newspapers are published in King William's Town. A railway traverses British K. from East London to Queenstown. Pop. (1875) 9,183 of British and German descent (exclusive of the military), with 108,973 of native races, Amaxosa and Amafengu Kafirs.

KAFFRARIA, *káf-frá-re-á*, PROPER, or INDEPENDENT KAFFRARIA: region in s. Africa. The designation Kaffraria was formerly applied to the whole coast region of s. Africa e. of the Great Fish river. Then it was long limited to a strip between Cape Colony and Natal, bounded by the Great Kei and Umzimculu rivers. Since 1875 it is, however, false to speak of this as independent Kafirland; as Fingoland, the Idutwya Reserve, Tambookieland, and other districts beyond the Kei, are now annexed to Cape Colony. This annexed Transkei territory has a larger area than the really independent portion on the sea-board.

K. is drained by the Great Kei, the Umzimvoobo or St. John's river, and its fan-like branches, the Tsetse and Tena, which rise in the Quathlamba; the Umzimculu, Umtata, Umbashee, and several other streams, with short courses, which rise in a high escarpment or ridge, forming a sort of buttress to an undulating grassy but woodless plateau, along the foot of the mountains, about 2,500 ft. above sea-level. The rivers, especially near the coast, run through deep-wooded kloofs sunk below the level of the surrounding country, and none of them are navigable. The coast generally is rocky and dangerous, and should not be approached closer than three m.: anchorage may be found in one or two shallow bays e. of the St. John's river.

K. is inhabited by the remains of the Amaxosa and Amamtembu tribes of Kafirs (who since the annexation of British Kaffraria, have retired across the Kei river), and by the once powerful tribes of the Amagaleka, Amampondos, and Amabaxa; besides the remains of many broken Zulu tribes, refugees from the wars of Chaka and Dingaan, who have found shelter in that portion of the country that borders on Natal. The total number of natives may be roughly estimated at 300,000; but it is probable in a very few years the whole region will be absorbed into the neighboring colonies of British Kaffraria and Natal, as the population is rapidly decreasing, and the chiefs fast losing their prestige and influence. The paramount chief is Rili,

KAFFRE BREAD—KAFIRISTAN.

or Creili, of the Amagaleka tribe, who has his principal kraal about 20 m. e. of the Great Kei river.

The soil of K. is fertile. The natives raise sufficient crops of Indian and Kafir corn, pumpkins, etc., for their own use. Cotton has been successfully grown in many localities along the coast. Cattle, horses, and goats thrive, and a considerable trade with adjacent colonies is carried on in hides, horns, goat-skins, tallow, and wagon-wood. The Wesleyan Soc. have established many well-organized stations, forming convenient halting-places along the lines of road which traverse Kaffraria between the Cape Colony and Natal, and where travellers meet a kind reception.

KAFFRE-BREAD: see CAFFER-BREAD.

KAFILA, or KAFILAH, n. *kāf'ī-la* [Arab. *kafala*]: a caravan or company travelling with camels.

KAF'IR CORN: see DURRA.

KAFIRISTAN, *kā-fē-rēs-tān'* [Ar. country of the Kafirs or infidels]: region of central Asia, on the s. declivity of the Hindu Kush, forming part of the n. basin of the Cabul, 35°-36° n. lat., and 69° 20'-71° 20' e. long.; 7,000 sq. m. The country is divided into narrow valleys by spurs of the Hindu Kush. The inhabitants, whose number is unknown, differ, as the name of the country implies, in creed and origin from the great body of the neighboring tribes; in features and complexion, they claim kindred with Europeans. Their language, too, is said to be wholly independent of the other dialects of central Asia. This state of isolation is due mainly to the natural defenses of the region, which, though repeatedly invaded, has never yet been subdued. The soil is fertile enough to render external intercourse comparatively unnecessary, yielding fruits, wheat, and millet, and feeding large herds of cattle, sheep, and goats. Metals and timber abound, which are wrought by the people with considerable skill.

KAFIRS.

KAFIRS, or **KAFFIRS**, or **KAFFRES**, or **CAFFRES**, *ká'fêrz* or *káf'êrz*: great family of the human race inhabiting s. Africa; classed by Dr. Latham in division B of the variety Atlantidæ, their physical conformation being modified negro; and which includes also Betjuans (q.v.), Ovampos, Damaras, and other similar tribes living in the region s. of 18° s. latitude, and extending to the boundaries of the Cape Colony. By the term K., however, the tribes inhabiting the coast-country on the e. side of s.e. Africa are generally understood, and recent events have further narrowed the designation in a popular sense as applying specially to the tribes living in the country between the Cape Colony and Natal, those e. of the latter colony, as far n. as Delagoa, being now better known as Zulus or Zulu Kafirs. The general distribution of the K. is as follows (prefix *Ama* signifies tribe or family): 1. Tribes (Amatabele, Amazulu, etc., n. of Natal; Amampondo, Amaxosa, etc., in Kaffraria Proper) speaking the Zulu language and its dialects, inhabiting the e. coast region; 2. Tribes (Makololo, n., and Bakuku, n.w. of Lake Ngami; Bakalibari, etc.), speaking the Sichuana language and its dialects, inhabiting the central region and known under the general name of Betjuans; 3. Tribes (Ovampos and Damaras) speaking the Ovampo or Otjiherero and its dialects; inhabiting the west-coast region.

History, etc.—The word Kafirs [Ar. unbeliever] was applied by the Mohammedan inhabitants of the e. coast to the native tribes south of them; and was adopted by the Portuguese, after their settlements at Melinda and Mozambique, to designate the inhabitants of the vast region southward extending to the country of the Hottentots, now the Cape Colony.

The oldest genealogical records of the chiefs of the K. go back to 1617. In 1688, the old Dutch colonial records first mention the K. as having at that early period driven the Hottentot aborigines as far s. as the Great Fish river; and 1784, that river was declared the boundary of the Cape Colony to the east. In 1798, began the series of Kafir wars with the British, and till 1811 the K. were repeatedly attacked and driven across the Fish river. In 1819, under the leadership of a false prophet called Makanna, they ventured to attack Graham's Town, but were repulsed with great slaughter. A period of broken peace and ill-kept treaties then succeeded, during which time a considerable European and Hottentot population had been settled along the frontier (1820). In 1828, they were driven out of the Kat river valley, which was filled with Hottentot settlers; then came the great war of 1834-5, which cost Britain more than a million sterling, and ended in the K. being driven e. of the Great Kei; and the territory between it and the Great Fish river was taken possession of by Sir. B. Durban, but immediately restored by the then colonial sec. Lord Glenelg. In 1846, war, which had been long inevitable, again broke out, and the Gaika and Islambie K., members of the great Amaxosa tribe, invaded the colony, and overran the whole of the frontier districts

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as far w. as Uitenhage, and n. to the Stormbergen, inflicting great loss even on the imperial troops on many occasions. Again, under Sir. H. Smith 1848, they were driven back, and the country that they inhabited once more annexed to the British crown, under the title British Kaffraria. Unfortunately, however, the influence of the chiefs remained unbroken, and they used it for evil by again invading the colony 1851, and this time not only the Gaika tribes, but the whole of the Amaxosa and Amantembu, besides a numerous body of rebel Hottentots, all well armed and provided with ammunition. Again, after a struggle of many months, they were finally repulsed; and Sir. George Grey, by his astute policy, succeeded in breaking the power of the chiefs, dispersing the tribes among the European settlers, and utterly destroying their strength, in which he was not a little assisted by a terrible famine which about that period fell on the unfortunate people, they having neglected to plant their fields, and having killed nearly all their cattle, at the command of a false prophet called Umlangeni, whose influence the deluded chiefs used to urge their people to this last war. In 1877 a new disturbance broke out among the Galeka K. in the Transkei territory, extended to the Gaikas, and was followed by the war with the Zulus. There was sharp fighting between the K. and the English and colonial forces; and the anxiety created by the war inflicted a serious check on the prosperity of the frontier settlements. A well-armed European population now occupies British Kaffraria, and the natives look for justice to local magistrates instead of to their former chiefs. Beyond the Kei river, the chiefs still rule, but their power is much broken.

The Kafir races are a tall, well-made, and generally handsome people, of a dark brown or bronze color, and hair in short woolly tufts. To the northward, they gradually become more assimilated to the negro type, until at last the two races seem to blend. They are brave, and in times of peace, kind and hospitable to strangers, affectionate husbands and fathers; and their minds have a peculiarly acute and logical turn, which in many of the English 'palavers' with them gave them the best of the argument. They are an honest people, except, perhaps, as regards cattle. Although their idea of God appears very indistinct, and their feelings of veneration but small, yet they are very superstitious, and dread the influence of wizards and sorcerers. Their huts, built by the women, are of beehive shape, composed of wattles stretched with grass, and a collection of them is called a 'kraal,' a word of Portuguese origin signifying an inclosure. The general rule of the chiefs is patriarchal, they being assisted, however, by a number of 'pakati,' or councilors, whose advice is generally followed by the chief. Polygamy is allowed, and wives are generally purchased for cattle. The chief has absolute power over the property of his whole tribe, though he seldom exercises it. If any individual accumulates great wealth, an accusation of witchcraft is sure to

KAFTAN—KAGA.

make him disgorge it. They in common with all other African nations, practice circumcision and many peculiar rites of purification, many of them analogous to those prescribed in the Mosaic law; but these rites seem, both in Africa and Asia, to have been generally practiced at an earlier period even than the Jews adopted them. The Kafir criminal code is very simple: a fine, great or small, of cattle pays for almost any offense, and the *lex talionis* is strictly forbidden even in case of murder. Many of their ceremonies and dances are very gross and obscene, though the Kafir women, especially after marriage, are chaste and modest in deportment, in striking contrast to the Hottentot race. The K. are strictly a pastoral people, and the men tend their herds exclusively, even to milking them, leaving to the women the labor of cultivating their gardens, building their huts, gathering fuel, etc. They generally wear a blanket; the former robe of softened ox-hide is now very seldom seen. In war, the Kafir appears in the field naked and painted with a fiery red clay. The native arms are assagais and clubs, but the use of firearms is now prevalent among all the s. African tribes; and in the late war, the Kafir warriors, in skirmishing, excited the admiration of the light companies of some distinguished British regiments. The Kafir language is considered a dialect of the Sichuana, which is the original stock of the different tribes of the race. It is fine, sonorous, and expressive, with a most ingenious and complicated system of grammar. On the Cape frontier, many Hottentot and Dutch words have been introduced; and in the Zulu dialect, the Wesleyan missionaries and Bp. Colenso of Natal have published many excellent works tending to elucidate the philology of s. African languages.

The Amafengu, or Fingoes, are the remains of various Zulu tribes, refugees from the wars of Chaka, reduced to slavery by the Amaxosa K., and rescued by Sir B. Durban 1835, and settled by him along the e. frontier of the Cape Colony. They are a saving, careful people, and many of them are converted to Christianity. They have always been firm allies of the British against their hereditary enemies the K., though of the same race and language. The Fingoes are often, from their money-making propensities, called the Jews of the Kafir race. The Amampondo, Amabaxa, and other tribes near the Natal frontier, have never been at war with the British, although often quarrelling among themselves: they are gradually declining in numbers, and are not near so fine a race as the frontier Kafirs.

The number of K. has been estimated at three millions, scattered over about a million sq. m. Of these, there may be about 300,000 in Kaffraria Proper, 150,000 in British Kaffraria and Cape Colony, and 200,000 in Natal.—See KAFFRARIA PROPER: KAFFRARIA, BRITISH.

KAFTAN, *kāftan*: article of Turkish dress, like a dressing-gown, in use among other oriental nations.

KAGA, *kā'ga*: one of the 7 provinces of the old *hokurikudo*, or northern-land circuit of Japan, known also as

KAGOSHIMA—KAINIT.

Kashiu; bounded n. by the province of Noto, e. by Etchui, s. by Hida and Echizen, w. by the Japan Sea. It has several important cities and towns, one, Kanazawa, having pop. 70,000. K. was the seat of the Maëda family of nobles prior to the revolution of 1868, and has long had world-wide fame for its manufactures of bronzes and the exquisitely decorated pottery known as Kaga-ware.

KAGOSHIMA, *ká-gsô-shê'má*, or KAGOSIMA: town, cap. of the province of Satsuma, on a bay at the s. end of the island of Kiushiu, Japan. It is cap. of the feudal prince Satsuma, has an excellent harbor with a lighthouse, contains an armory and numerous manufactories, and was bombarded by the English 1863, Aug. 13, to compel Prince Satsuma to execute the murderers (led by the prince's brother) of H. L. Richardson, English merchant of Hong-Kong, and to pay an indemnity of \$125,000. Pop. 200,000.

KA'HAU, or PROBOS'CIS MONKEY: see NASALIS.

KAHLENBERG, *ká'lén-běrh*: hill of the Noric Alps on the Danube river just outside of Vienna, 1,100 ft. above the river. It has ruins of a church and castle where Sobieski prayed for success and began his attack on the Turks besieging Vienna 1683, Sep. It is a popular amusement resort.

KAIANIANS, *kī-ā'nē-anz*: Persian dynasty founded by Kai Kobad, who was placed on the throne by Rustem after the overthrow of Afrasiab; reckoned the second in the historic series and the sixth in the combined legendary and historic. It existed B.C. 660-334, and closed with the overthrow of Darius by Alexander.

KAI-FUNG-FU: see HONAN.

KAIL, n. *kāl* [Gael. and Ir. *cal*; Manx, *kail*; W. *cawl*, kail, cabbage: AS. *cawl*; Dan. *kaal* (see COLE and KALE)]: in *Scot.*, the cabbage kind in general; greens; broth made of vegetables, etc. KAIL-BROSE, in *Scot.*, a dish made by pouring the liquid of broth while boiling over dry oatmeal, and giving the mixture a slight stir: see BROSE. KAIL-YARD, n. *kāl-yārd'* [Sw. *kaalgård*, a garden of herbs]: in *Scot.*, a kitchen-garden.

KAIL, or KAYLE, n. *kāl*: see KEEL 2.

KAIM, or KAME, n. *kām* [AS. *camb*; Scot. *kaim*, a comb, crested: Gael. *cam*, crooked hill]: in *Scot.*, a name often given to certain elongated mounds of gravel, probably of glacial origin, occurring in the lower and broader valleys; eskirs or escars, which see; the crest of a hill; a low ridge.

KAIMACON, or CAIMACON, *kī'ma-kōn* [Turkish]: title given in the Ottoman Empire to a deputy, or governor.

KAIN, *kān*: old term in Scotch Law, denoting rent paid in kind, as in the shape of poultry or animals, to a landlord.

KAINIT, n. *kī'nīt* [Gr. *kainos*, recent]: in *agri.*, a kind of manure or top-dressing prepared from saline deposits rich in potassic salts, generally composed of potassic chloride, magnesic sulphate, and common salt.

KAINOZOIC—KAKODYL.

KAINOZOIC: see CAINOZOIC.

KAIRWAN, *kīr-wān'* (properly **KAIRAWÁN**): decayed town of n. Africa, in the state of Tunis, 80 m. s. of the town of Tunis, in a treeless, marshy plain. It is surrounded by a brick wall surmounted by four towers. It contains about 50 ecclesiastical structures, of which the Okba Mosque is one of the most sacred of Islam. Okba was a companion of the prophet; and his shrine and other sacred tombs have rendered K. the Mecca or sacred city of n. Africa. As such, it has been jealously guarded from defilement by the presence of Jews and for the most part of Christian travellers; but it was entered and explored by the French 1881. K. makes copper vessels, potash, and articles in leather. Pop. 12,000.

KAISARIYEH: see CÆSAREA.

KAISER, n. *kī'zér* or *kā'zér*: German title for Emperor, and, like *Czar*, or *Tsar*, derived from Cæsar. Having been applied in the time of Diocletian to the ruler of Dalmatia and the region along the Danube, who was heir presumptive to the imperial crown, it was used by the mediæval emperors of Germany; and in later days by the emperor of Austria. William I. of Prussia assumed it when he became German emperor 1871.

KAISERSLAUTERN; *kī'zér-s-law-térn*, or **LAUTERN**: thriving town of Rhenish Bavaria, pleasantly situated on the Lauter, 25 m. n.w. of Landau. Pop. (1871) 17,867; (1880) 26,323.

KAISERSWERTH: see FLIEDNER, THEODOR.

KAJAK, or **KAYAK**, n. *kā'yāk*, or **KYAK**, n. *kī'āk*: the boat of the Esquimaux, made of seal-skins stretched around a wooden frame, and closed at the top with the exception of a hole in the middle, where the boatman sits and propels it with a paddle.

KAKAPO, *kāk'ā-pō*, or **OWL PARROT** (*Strigops habroptilus*): remarkable bird, native of New Zealand, belonging to the Parrot family (*Psittacidae*), but of very owl-like appearance, and, like the owls, nocturnal, or nearly so, concealing itself in holes during the day, except in very gloomy weather. The K. takes possession of a hole which it may find among stones or the roots of trees, but seems also to have the power of making a burrow for itself. Dogs take it in its hole, although it makes some resistance. It is also pursued and taken by dogs when running on the ground. The flesh of the K. is more pleasant and delicate than that of any other parrot. This interesting bird has almost disappeared from the northern island of New Zealand, and is much more rare in the middle island than it was a few years ago. It will probably soon be extinct, unless means are adopted for its protection. It is the only known bird having large wings which does not use them for flight.

KAKODYL, n. *kāk'ō-dīl* [Gr. *kakos*, bad; *ōdmē*, smell]: one of the compounds which arsenic forms with the radical

KALA—KALAKAUA.

methyl, forming a heavy fuming poisonous liquid which takes fire when exposed to the air: see CACODYLE.

KALA, n. *ká'la* [Skr.]: in *Hindoo mythology*, Siva in one of his manifestations; sometimes used also for one of the names of Yama, regent of the dead; hence sometimes death itself.

KALAFAT, *ká-lá-fát'*: town in Little Wallachia, Roumania, on the left bank of the Danube river, directly opposite Widin; 155 m. from Bucharest. It occupies a naturally strong position, has been surrounded by a thick wall and provided with modern redoubts and fortifications, and as it commands the approach to the Danube, is a place of great strategic importance. With Widin it has been the scene of many fierce battles between the Turks and their various European foes. In the Russo-Turkish war 1829 the Russians lost heavily in an engagement here; 1854 several fights occurred in Jan., and the Turks repulsed a Russian assault Apr. 19; 1877, Apr., K. was occupied by Russian Cossacks, in May by Roumanian troops co-operating with the Russians, and was shelled by the Turks in Widin the latter month; and 1878, Jan., the Roumanians in K. were shelling and investing Widin when Turkey began overtures for peace.



Kakapo (*Strigops habroptilus*).

KALAKAUA, *ká-la-kow'a* (DAVID), King of the Hawaiians; b. Honolulu, 1836, Nov. 16. He is descended from an ancient king of the islands, was educated with other hereditary chiefs in the royal school at Honolulu, visited Cal. 1860; was defeated as candidate for the throne on the death of King Kamehameha by William Lunalilo 1872; and on the death of King Lunalilo was elected king by the legislature by a vote of 33 to six for ex-Queen Emma 1874, Feb. 12. He made a tour of the United States and Europe

KALAMA—KALAMAZOO.

1874-5 and 1881; crowned himself amid ceremonies of pomp in Honolulu 1883, Feb. 12; and was forced by a bloodless revolution, led by men having large mercantile interests on the islands, to dismiss an alleged corrupt ministry and to sign a new constitution which greatly limited the prerogatives of the crown, 1887, Jan. 10.—His queen, KAPIOLANI, b. 1835, Dec. 31, visited the United States, England (where she was a guest of Queen Victoria during the royal jubilee), and Paris 1887.—His heir and nominated successor is his eldest sister, LYDIA LILIUOKALANI, b. 1838, Sep. 2, wife of John O. Dominis, an Englishman who has occupied several important offices since K.'s accession.

KALAMA, *ka-lá'ma*: city, cap. of Cowlitz co., Washington; on the Columbia river and the Pacific div. of the N. Pacific railroad; 45 m. n. of Portland, Or., 65 m. s.e. of Astoria, 70 m. e. of the Pacific Ocean; laid out and incorporated as a city 1871. It is at the head of navigation on the Columbia river for deep-sea vessels, and for this reason was selected by the N. Pacific Railroad Company as the site for the headquarters, car and machine-shops, and warehouses of its Pacific division. Pop. (1880) 129; (1886) about 200.

KALAMAZOO, *kál-a-ma-zó'*: city, cap. of Kalamazoo co., Mich.; on Kalamazoo river, at intersection of the Mich. Central, Grand Rapids and Ind., and the K. div. of the Lake Shore and Mich. Southern railroads; 40 m. e. of Lake Mich., 49 m. s. of Grand Rapids, 68 m. w. of Jackson, 140 m. e.n.e. of Chicago, 143 m. w. of Detroit. It is the seat of Kalamazoo College (Bapt.), organized 1855 and having a library of 5,000 vols., the State Insane Asylum with accommodations for from 400 to 600 patients; and the Mich. Female Seminary (Presb.), organized 1866; is beautifully laid out and built; has an excellent water-power, Holly system of waterworks, paid fire department with steam-engines and fire-alarm telegraph, gas and electric light plants; contains a public library, art gallery, 16 churches, several public and private schools, 4 national banks (cap. \$476,000), 1 state bank (cap. \$50,000), public park, and driving park with a track well known to horse-men; and has manufactories of iron machinery, foundry products, flour, paper, carriages, pianos, billiard-tables, elevators, and various kinds of woodwork. K. was settled 1829, organized as a village 1831, and known by the name of its first settler, Bronson, till 1836. Pop. (1870) 9,181; (1880) 13,552; (1884) 13,909.

KALAMAZOO' (or KEKALAMAZOO') RIVER: rises in Hillsdale co., Mich., flows w. n.w. to Kalamazoo, thence n.w. to Lake Mich., at a point 29 m. s. of Grand river, 41 m. n. of St. Joseph river; length 200 m.; air-line from source to mouth 98 m.; width of mouth 300-400 ft.; navigable at all seasons by 50-ton vessels for 40 m. from its mouth. It drains the rich alluvial country in Hillsdale, Kalamazoo, Calhoun, and Allegan counties, flows through valuable pine and oak forests, affords excellent manufacturing sites, has on its banks the cities of Kalamazoo, Mar-

KALBE—KALEVALA.

shall, Battle Creek, and Allegan, and offers to archeologists a number of interesting remains of the mound-builders.

KALBE, *kál'béh* (or CALBE), AN DER SAALE: town of Prussian Saxony, 18 m. s. of Magdeburg, on the left bank of the Saale. Spinning and weaving, with manufactures of paper, tobacco, and sugar, are carried on. Pop. (1880) 8,522.

KALE, *kāl*, or BORECOLE, *bör'köl* [Ger. *Kohl*, Scot. *KAIL*, q.v.]: cultivated variety of *Brassica oleracea*, differing from CABBAGE in the open heads of leaves, which are used for culinary purposes as *greens*, and also as food for cattle. There are many sub-varieties, of which some are of green, others of reddish-brown or purplish color; some have the leaves comparatively plain, others have them much waved or curled, also some fringed or lacinated. Most of the kinds are biennial, like the cabbage; but some may be reckoned perennial, as the *Milan Kale* (*Chou de Milan*), and are frequently propagated by cuttings. The kind called *German Greens* is one of the most delicate, and is much cultivated in Britain, chiefly as a winter vegetable. The more the leaves are curled the more it is esteemed. The mode of its cultivation nearly agrees with that of cabbage (q.v.).

KALE, SEA: see SEA KALE.

KALEIDOPHONE, n. *ka-lī'do-fōn* [Gr. *kalos*, beautiful; *eidos*, form; *phōnē*, sound]: instrument invented by Prof. Wheatstone, to illustrate the phenomena of waves of sound.

KALEIDOSCOPE, n. *kā-lī'dō-skōp* [Gr. *kālōs*, beautiful; *eidos*, an appearance; *skopēō*, I view]: optical instrument which presents to the eye an endless series of beautiful images or patterns of its inclosed objects by a simple change of its position. It was invented by Sir David Brewster 1817. It consists of a tube, through whose whole length pass two mirrors or reflecting planes, hinged together along one edge, and making with each other an angle which is an aliquot part of 180°, while one end of the tube is fitted with an eyeglass, and the other is closed by two glasses, at a small distance from each other, between which are placed little fragments of glass or other variously colored objects. The eye looking into the tube now perceives these objects multiplied as many times as the angle which the reflecting planes make with each other is contained in the whole circumference of a circle, and always symmetrically disposed; and the slightest shaking of the instrument produces new figures. There are various modifications of the K. by some of which its power is much increased; and it is not only a pleasing toy, but of great use to pattern-drawers and others, to whom it supplies endless varieties of figures.

KALENDAR, KALENDS: see CALENDAR.

KALEVALA, *kā-lā-vā'la*: national epic of Finland. The first attempt to collect the songs that compose it was

KALGAN—KÂLIDÂSA.

by Dr. Zacharias Topelius, who published some fragments 1822. In 1835 Dr. Elias Lönnrot, who had travelled and lived among the peasantry for many years, brought out a systematically arranged collection of 32 runes or cantos and 12,000 lines; and 1849 he published a new edition of 50 runes and 22,793 lines. From these editions Castren translated the work into Swedish 1844, and Collin 1865, Leonzon le Duc into French 1845, and Schiefner into German 1852. In 1868 the late Prof. John A. Porter of Yale Univ. translated a small portion—the legend of *Aino*—into English; but there was no complete English translation till 1888, when John Martin Crawford, M.D., of Cincinnati, brought out a 2-vol. edition (John B. Alden, New York). See FINNISH LANGUAGE AND LITERATURE.

KALGAN, *kâl-gân'*, or CHANG-KEA-KOW: noted commercial city in the province of Chih-li, China; on the Yangho river, in the line of the great wall between Peking and Kiakhta, 137 m. n.w. of the former; lat. 40° 50' n., long. 114° 54' e.; elevation above sea-level 2,810 ft. It extends 3 m. along the Yangho, consists of a walled town or fortress and suburbs, is in a beautiful and fertile valley with populous villages near by, manufactures large quantities of soda, and is on the main road of the overland route between China and Russia. (Pop. 1872) estimated 70,000–100,000.

KALGUEF, *kâl-gô-ěf'*, or KOLGUEV, *köl-gô-ěv'*: island of Russia, in the Arctic Ocean, 240 m. in circumference, belonging to the govt. of Archangel. It is 115 m. e. of the n. extremity of the peninsula of Kanin. It is the resort of innumerable flocks of wild-fowl, especially eider-ducks, geese, and swans.

KALI, n. *kāl'ti* [see ALKALI]: a general name for those plants the ashes of which are used in making glass; the principal plants which produce soda are various species of *Salicorn'nia*, *Salsola*, *Halimocnēmis*, and *Kochia*; caustic potash of the Ger. chemists. KA'LIIUM, n. *-li-ūm*, among the Ger. chemists, the metallic base of kali—equivalent to our potassium. KA'LIFORM, a. *-fawrm* [L. *forma*, shape]: formed like the plant kali, or glass-wort.

KÂLI: Indian goddess: see UMA.

KÂLIDÂSA, *kâ-lē-dâ'sâ*: greatest dramatist, and one of the most celebrated poets of India. He is known to the literary public of Europe especially through his drama *S'âkuntala*, which, first introduced to the western world by Sir William Jones (1789), created so great a sensation throughout Europe, that the early success obtained by Sanskrit studies in England and Germany may be considered due to this masterpiece of Sanskrit literature. Another drama of the same poet, and next in renown to *S'âkuntala*, is the *Vikramorvas'î*, or the Hero and the Nymph. Besides these works, Hindu tradition ascribes to his authorship a third drama and several poems, which European critics will not believe could ever have sprung from a mind like that of Kâlidâsa. Prof. Lassen, in the *Indische Alterthumskunde*, passes the following judgment on this poet:

KALIF—KALIHARI DESERT.

'Kālidāsa may be considered as the brightest star in the firmament of Hindu artificial poetry. He deserves this praise on account of the mastery with which he wields the language, and on account of the consummate tact with which he imparts to it a more simple or more artificial form, according to the requirements of the subject treated by him, without falling into the artificial diction of later poets, or overstepping the limits of good taste; on account of the variety of his creations, his ingenious conceptions, and his happy choice of subjects; and not less on account of the complete manner in which he attains his poetical ends, the beauty of his narrative, the delicacy of his sentiment, and the fertility of his imagination.' But though we are enabled to appreciate the merits of this poet, we know little of his personal history. That he lived at Ujjayini or Oujein, and that he was 'one of the nine gems of the court of Vikramāditya,' is all that is related in regard to him. But as there have been several Vikramādityas at Ujjayini, his date is as uncertain as that of any personage of the ancient history of India. The native tradition which assigns his life to the 1st c., is without evidence. Dr. Bhāo Dāji, in a learned and ingenious essay 'On the Sanskrit Poet, Kālidāsa' (*Journal of the Bombay Branch of the Royal As. Soc.*, 1860, Oct.), has endeavored to identify Vikramāditya, the contemporary of K., with Harsha Vikramāditya, which would assign K. to the middle of the 6th c. Certain dialectic peculiarities have led some of the best critics to give K. the date approximately of the 3d century.

KALIF: see CALIPH.

KALIHARI DESERT, *kā-lē-hā'rē*. The Kalihari is a vast central and nearly uninhabited tract of country lying between Great Namaqualand and the Betjouana country, in south Africa, extending from the northern banks of the Gariep or Orange river to the lat. of 21° s., or the verge of the Ngami region, a distance of nearly 600 m., with an average breadth of about 350 m., and presenting some curious physical features quite distinct from other desert regions of the globe. It is a wholly riverless, sandy, but in many places well-wooded region, on which rain seldom falls, intersected by dry watercourses, with a substratum of a tufaceous limestone, and to all appearance formerly the bed of an immense lake. Livingstone considers it remarkable for little water and considerable vegetation, and therefore very different from the karroos of the Cape Colony, which have neither water nor vegetation except after heavy rains, and from the bare and sandy deserts of north Africa and Arabia. No mountains or elevations of any considerable height are found in the Kalihari, the general level of which may be considered as 3,000 ft. above the sea. The few springs or 'sucking-places' which here and there are found are generally carefully concealed by the Bakillhari, a miserable wandering race of Betjouana Bushmen, who roam through the desert in quest of game. The Kalihari has been explored by Andersson and others; see his travels and those of Baines and Livingstone. After heavy rains,

KALINITE—KALIYUGA.

immense herds of elephants, rhinoceroses, and giraffes are found in its dense thickets, and feed on the succulent wild melons called 'Kengwe,' which then abound there. In the north part are immense forests of thorn-trees; coal and copper are abundant, and gold has been discovered in two mountain-ranges.

KALINITE, n. *kā'lin-īt* [Ger. *kali*, potash]: same as alum, but occurring native in many places, and as a sublimation product in the craters and solfataras of volcanoes.

KALISH (Polish **KALISZ**), *kā'lish*: town of Poland, on the Prosna, chief town of the govt. of K., 136 m. w.s.w. of Warsaw, and on the boundary of Prussia. It is one of the oldest and finest Polish towns, and was formerly cap. of a palatinate. There is an extensive trade. The adjoining country is the best cultivated in the kingdom. Two famous battles were fought here—the first between the Poles and Russians and the Swedes 1706; the other between the Russians and Saxons 1813. Pop. of town (1880) 20,280.—The district of K. has 4,200 sq. m.; pop. (1881) 765,403.

KALISPELS, *kāl'is-péls*, or **PENDS D'OREILLES**, *pěnds do-rèl'*, F. *pōng do-rây'*: tribe of American Indians of the Selish group, occupying reservations in Wash., Mont., Ida., and Brit. Columbia. Since Father De Smet (q.v.) founded missions among them 1844, they have been peaceable, industrious, and anxious for the benefits of civilization. In Mont., they were removed from a reservation in the Bitter Root valley to the Jocko reservation 1872, and 1880 they numbered 875; in Ida., they followed farming in the terr., and across the line in Brit. Columbia, and 1880 they numbered 600; and in Wash., they were removed from their long occupied reservation in the Kalispel valley, e. of the Cascade Mountains, to a new reservation n. and w. of the Columbia river 1872, and 1880 they numbered 400.

KALIYUGA, *kā-lē-yō'gā*, in Hindu Chronology: fourth and last of the periods contained in a Mahâyuga or great Yuga (q.v.). It may be compared to the Iron Age of classical mythology. It consists, according to native imagination, of 432,000 solar-sidereal years, and begins 3,101 years before the Christian era. The relation of the four Yugas being marked by a successive physical and moral decrement of created beings, the Kaliyuga is the worst of all. 'In the Kr'ita (or first) age,' Manu says, 'the (genius of) Truth and Right (in the form of a bull) stands firm on his four feet, nor does any advantage accrue to men from iniquity. But in the following ages, by reason of unjust gains, he is deprived successively of one foot; and even just emoluments, through the prevalence of theft, falsehood, and fraud, are gradually diminished by one foot (i.e., by a fourth part).' The estimate in which this K., our present age, is held by the modern Hindus may be gathered from one of their most celebrated Purânas, the Padma-Purân'a. In the last chapter of the Kr'iyâyogasâra of this Purâna, the following account is given of it: 'In the K., (the genius of) Right will have but one foot; every one will delight in evil. The four castes will be devoted to wickedness, and deprived of the

KALK—KALMUCKS.

nourishment which is fit for them. The Brahmans will neglect the Vedas, hanker after presents, be lustful and cruel. They will despise the Scriptures, gamble, steal, and desire intercourse with widows. . . . For the sake of a livelihood, some Brahmans will become arrant rogues. . . . The Sûdras will endeavor to lead the life of the Brahmans; and out of friendship, people will bear false witness . . . they will injure the wives of others, and their speech will be that of falsehood. Greedy of the wealth of others, they will entertain a guest according to the behest of the Scriptures, but afterward kill him out of covetousness; they are indeed worthy of hell.'

KALK, n. *kâlk* [L. *calc*, lime]: German for lime.

KALKI, n. *kâl'kî* [Skr.]: in *Hind. myth.*, the 10th avatar (incarnation) of Vishnôo or Vishnu (q.v.).

KALLIFTHORGAN, n. *kâl-îf-thawr'gan* [etym. doubtful]: musical instrument played as a piano, and imitating the effect of a violin, violoncello, and double-bass.

KALMAR, *kâl'mâr*: town and seaport on the s.e. coast of Sweden, cap. of the lan. of K.; on the K. Sound, opposite the island of Öland, about 200 m. s.s.w. of Stockholm. It has a good harbor, a handsome cathedral, and a large and beautiful castle, in which 1397, July 12, the treaty called the 'Union of Kalmar,' which settled the succession to the three northern kingdoms upon Queen Margaret of Denmark and her heirs for ever, was agreed to by the deputies of the three kingdoms. The union, nevertheless, lasted only till the death of Margaret (see DENMARK, HISTORY OF). The commerce of the town is considerable, and there are manufactures of sugar and tobacco. Pop. (1880) 10,963.

KALMIA, *kâl'mî-â*: genus of plants of nat. ord, *Ericææ*, consisting of evergreen shrubs, mostly about two or three ft. high, natives of N. America, with red, pink, or white flowers, generally in corymbs. The flowers are very delicate and beautiful, and the corolla is in the shape of a wide and shallow bell. The plants thrive in a peat-soil. *K. latifolia*, MOUNTAIN LAUREL, or CALICO BUSH of N. America, occupies large tracts on the Alleghany Mountains. It grows to the height of ten ft., and the wood is very hard. It is narcotic and dangerous; the leaves are poisonous to many animals, and honey from the flowers has noxious properties. A decoction of the leaves has been used with advantage in cutaneous diseases.

KALMUCK, n. *kâl'mûck* [from the people called *Kalmucks*, or *Calmucks*]: coarse, shaggy cloth, resembling a bear skin; coarse, colored cotton cloth made in Persia.

KALMUCKS, or **CALMUCS**, *kâl'mûks*, or, as they call themselves, *Derben-Ueirat* (the Four Relatives), designated also as *Eleutes* and *Khalimik* (Apostates): most numerous and celebrated of the Mongol nations. They are divided into four tribes, the first of which, the *Khoskôts* (Warriors), number nearly 60,000 families, and inhabit the country around the Koko-nur, which they consider the native country of the race. One portion of this tribe migrated to

KALNA—KALONG.

the banks of the Irtisch, and became subsequently incorporated with the second tribe, the Dzûngars; another portion migrated to the banks of the Volga, in the 17th c., and is found at the present day in the govt. of Astrakhan. The second tribe are the *Dzûngars*, who give the name to a large territory (Dzungaria) in the w. of Chinese Tartary; they number about 20,000 families. The third tribe are the *Derbets* or *Tchoros*, who deserted Dzûngaria, and finally, to the number of 15,000 families, removed a few years ago to the plains of the Ili and the Don, where they are being rapidly incorporated with the Don Cossacks. The fourth great tribe of the K. are the *Torgots*, who, about 1660, separated from the Dzûngars, and settled in the plains of the Volga, whence they were called the *K. of the Volga*; but finding the Russian rule too severe, the majority returned to Dzûngaria (q. v.).

No other Mongol or Turkish race presents such characteristic traits as the K.; indeed, they answer exactly to the description given of them by Jornandes 13 centuries ago, when, under the name of Huns, they devastated s. Europe. The Kalmuck is short in stature, with broad shoulders, and a large head; has small black eyes, always appearing half-shut, and slanting downward toward the nose, which is flat, with wide nostrils; the hair is black, coarse and straight, and the complexion deeply swarthy. The Kalmuck is considered the original type of the Mongol and Manchû races, and his ugliness is the index of the purity of his descent. They are a nomad, predatory, and warlike race, and pass the greater part of their lives in the saddle. Their usual food is barley-flour soaked with water, and their drink is the 'koumiss' made from fermented mare's milk. In 1829, Russia established a Kalmuck institute for the training of interpreters and govt. officials for the K. of Russia, and she has since been making great efforts to introduce civilization among them. Most of the K. are Buddhists; but a few have adopted Mohammedanism, or Christianity.

KAL'NA: see CULNA.

KALOCSA, *köh-löch'ökh*: town of Hungary, near the left bank of the Danube, about 70 m. s. of Pesth. It contains a fortified bishop's palace, with a library of 30,000 vols. K. is a steam-packet station on the Danube. Pop. (1880) 15,789.

KALONG, *kā'long* [Javanese name]: originally one or more species of frugivorous Bat (q. v.) inhabiting Java; but now frequently applied to all the frugivorous bats, the bats, the family *Pteropidæ*; or at least to all the species of genus *Pteropus*. The *Pteropidæ* are large bats, and some are the largest of *Cheiroptera*. They are called *Roussette* by French naturalists, and often, popularly, *FLYING FOX* by Europeans in the East. They are found in the E. Indies, Japan, Australia, Africa, and S. America. There are many species. Their food consists chiefly of soft fruit, as bananas, figs, etc. The Javanese K. (*Pteropus Javanicus*) measures about 5½ ft. in expanse of wing. The head and body are

KALPA—KALUGA.

more than 12 inches long. It is gregarious, and during the day, great numbers may be seen hanging by their hinder claws, motionless and silent, on the branches of trees which they have selected for their abode. The body is covered with reddish-brown fur. This and the other true *Pteropi* have no tail, and a smaller number of vertebræ—24 in all—than any other mammalia. Some of the *Pteropidae* have a very short tail. The flesh of some is eaten, and one inhabiting the Moluccas and Isles of Sunda, called the Eatable Kalong (*P. edulis*), is said to be white and delicate. Some species are migratory.

KALPA, *kāl'pa*, in Hindu Chronology: a day and night of Brahmâ, which, according to some, is a period of 4,320,000,000 solar-sidereal years, or years of mortals, measuring the duration of the world; and as many years, the interval of its annihilation. The Bhavishya-Purân'a admits of an infinity of kalpas; other Purânas enumerate 30. A great K. comprises not a day, but a life of Brahmâ.—In Vedic literature K. is a Vedānga: see KALPA-SŪTRA.

KALPA-SŪTRA, *kāl'pa-sū'tra*: in Vedic literature, those Sanskrit works which treat of the ceremonial referring to the performance of a Vedic sacrifice: see VEDA.—In Jaina literature, it is the name of the most sacred religious work of the Jainas: see JAINAS. It is occupied chiefly with the legendary history of Mahavîra, the last of their 24 deified saints, or Tîrthankaras, but contains also an account of other four saints of the same class. The name of the author was Bhadrâ Bâhu, and the work was composed, as Stevenson assumes, A.D. 411; but the conjecture of another writer places it 632. It is held in so high respect with the Jainas, that, 'of the eight days in the middle of the rains which are devoted to the reading of those works esteemed peculiarly sacred, no less than five are allotted to the Kalpa-Sûtra.' Stevenson, *The Kalpa Sûtra and Nava Tatva* (Lond. 1848).

KALSOMINE, *kāl'so-mîn*, or **CALCIMINE**, *kāl'si-mîn*: mixture of zinc-white and ground glue with water, used to cover side walls and ceilings instead of whitewash of clear lime. It may be tinted to any desired shade with coloring material, and when properly compounded and applied will not rub off as easily as ordinary whitewash. It is laid on with a soft brush, generally narrower and with longer bristles than a whitewash-brush, but the glue in it makes it difficult for an inexperienced person to apply it.

KALUGA, *kâ-lô'gâ*: a government in Russia, immediately s.e. of that of Smolensk; 11,780 sq. m. The surface is flat; the soil, stony, sandy, and only moderately fertile. More than half of the province is under forest. It is watered by numerous rivers, the chief of which is the Oka. The principal occupation of the inhabitants is the cultivation of hemp. Sail-cloth, largely exported to Europe and America, is the chief manufacture. Colored cloths for the China trade are made. The gov't. of K. is divided into eleven districts Pop. (1879) 1,098,814.

KALUGA—KĀMA.

KALU'GA: chief town of the govt. of K., Russia; on the right bank of the Oka, lat. $54^{\circ} 31'$ n., long. $36^{\circ} 20'$ e. From the 14th to the 18th c., its stronghold was a great protection against the invasions of the Lithuanians, the Tartars of the Great Horde, and especially against the Crimean Tartars. In the centre of the empire and on a navigable river, it has an extensive corn trade, the corn being sent down the Oka to Nijni-Novgorod, thence up the Volga, the Volga canals, and the Neva, to St. Petersburg and the Baltic ports. The value of this branch of trade is 22,000,000 rubles (abt. \$17,500,000). There are several leather and other factories. K. has for many years been a place of banishment for political offenders. It was the residence of Schamyl, the Circassian chief. Pop. (1880) 38,608.

KAM: see KĪM-KAM.

KAMA, *kā'mā*: navigable river of European Russia, principal affluent of the Volga. It rises in the govt. of Viatka, and after a s.w. course of 1,100 m. joins the Volga in the govt. of Kasan, 50 m. above the town of Kasan. Its chief tributaries are the Viatka, the Tchoussovaia, and the Bielaia. This river is navigable 40 m. below its source, and the navigation commences in the beginning of May. The annual value of the goods conveyed on the K. is estimated at \$40,000,000. The river abounds in fish, especially salmon.

KĀMA, *kā'ma*, or **KĀMADEVA**, *kā-ma-dē'vā*: Hindu god of Love. In Sanskrit poetry, especially of a later period, he is the favorite theme of descriptions and allusions; and mythology exalts his power so much that it allows even the god Brahmā to succumb to it. According to some Purānas, he was originally a son of Brahmā; according to others, a son of *Dharma* (the genius of Virtue), by *S'raddhā* (the genius of Faith), herself a daughter of *Daksha*, one of the mind-born sons of Brahmā. The god S'iva being on one occasion greatly incensed at K., reduced him to ashes; but ultimately, moved by the affliction of Rati (Voluptuousness), the wife of K., he promised her that her husband should be reborn as a son of *Kr'ishna*. The god Kr'ishna, accordingly having married Rukminī, she bore him *Pradyumna*, who was the god of Love. But when the infant was six days old, it was stolen from the lying-in-chamber by the terrible demon S'ambara; for the latter foreknew that Pradyumna, if he lived, would be his destroyer. The boy was thrown into the ocean, and swallowed by a large fish. Yet he did not die; for that fish was caught by fishermen, and delivered to *Mâyâvatī*, mistress of S'ambara's household; and when it was cut open, the child was taken from it. While *Mâyâvatī* wondered who this could be, the divine sage, Nārada, satisfied her curiosity, and counselled her to rear tenderly this offspring of Kr'ishna. She acted as he advised her; and when Pradyumna grew up, and learned his own history, he slew the demon S'ambara. *Mâyâvatī*, however, was later apprised by Kr'ishna that she was not the wife of S'ambara, as she had fancied herself to be, but that of Pradyumna—

KAMALA—KAMINETZ PODOLSK.

in fact, another form of Rati, who was the wife of K. in his prior existence.—K. is described or represented as holding in his hands a bow made of sugar-cane, and strung with bees, besides five arrows, each tipped with the blossom of a flower which is supposed to conquer one of the senses. His standard is, agreeably to the legend above mentioned, a fabulous fish, called Makara; and he rides on a parrot or sparrow—symbol of voluptuousness. His epithets are numerous, but easily accounted for from the incidents above noted, and from the effects of love on the mind and senses. His wife is *Rati*, called also *Kāmakalā*, 'a portion of Kāma,' or *Prīti*, 'affection;' his daughter is *Trishā*, 'thirst or desire;' and his son is *Aniruddha*, 'the unrestrained.'

KAMALA, *kām'a-la*, or KAMEELA, *ka-mē'la*: reddish brown powder prepared from the capsules of the *rottlera tinctoria*, a small euphorbiaceous plant that grows wild in India, China, some parts of Africa, and Australia, and used medicinally as a cathartic, for killing tape-worms, and for various skin diseases, and commercially as a dye-stuff, producing the peculiar deep red color common to E. Indian fabrics.

KAMBALIA, *kām bā'li-a*, or SERAIA, *sēr-ī'ya* (sometimes SERRYAH): seaport of Kattywar, w. India, on the Gulf of Cutch; one of the safest harbors on that coast.

KAMBA'LUC (*Khanbalik*): see PEKING.

KAMEHAMEHA, *kā-mēh-hā-mēh-hā* (I.—V.), Kings of the Hawaiian Islands: see SANDWICH ISLANDS.

KA'MENZ: see CAMENZ.

KAMES, Lord: see HOME, HENRY.

KAMI, *kā'mē*: in Japanese, *God*; in Japanese literature, the celestial gods of the first mythical dynasty, the demi-gods of the second dynasty, spiritual princes, and any one beatified. Shintoism teaches that the first K. sprouted upward from the earth like a rush; that after a long period of evolution, creative perfection was reached in Izanagi and Izanami, to whom was assigned the duty of completing the making of earth out of the heavy precipitations from chaos, and then of furnishing it; and that after they had made lands and islands, they peopled them with gods. From this belief originated the Japanese cult for their ancestors. When the first conquerors divided the country into feudal territories, the chief man in each selected a K. or heavenly-god as his ancestor or tutelary divinity, and erected a *miya* or shrine in his honor. They further believe that the deeds done in the body will be rewarded or punished after the spirit has left its natural tenement, and therefore derive pleasure in beatifying or deifying a man after his death who had lived a life of piety, purity, patriotism, and benevolence. Such a man was declared a K., and was worshipped in a temple erected by his family, his native town or city, or the country.

KAMINETZ-PODOLSK, *kām-yēn'ēts-po-dōlsk*, or PODOLSK, *po-dōlsk'*: town of w. Russia, cap. of the govt. of

KAMPEN—KAMSIN.

Podolia; picturesquely situated near the Austrian frontier, 982 m. s. of St. Petersburg, on a steep rock above the river Smotritza, affluent of the Dniester. It is to be distinguished from the Kaminetz in Lithuania. Its foundation dates back from the earliest times. The most noteworthy buildings are the Gothic Cathedral and the Dominican Church. The fortifications, razed 1812, have been renewed. K. was, before the partition of Poland, the strongest bulwark of that country against the Turks. Pop. (1880) 22,611.

KAMPEN, *kām'pèn*: one of the prettiest towns of the Netherlands, province of Overijssel, near the mouth of the Yssel, in the Zuyder Zee. Here a bridge 790 ft. long, extends across the river. Though formerly of greater importance, K. still has considerable general trade. Pop. (1881) 17,444.

KÄMPFER, *kämp'fēr* (or Kaempfer), ENGELBRECHT: 1651, Nov. 16—1716, Nov. 2; b. Lemgo, Lippe, Germany: author. He was educated for a physician at Königsberg, was appointed sec. to the Swedish embassy to Persia 1638, entered the naval service of the Dutch E. India Company as surgeon 1685, became physician to the embassy at Japan 1690, and returned to Lemgo 1693. He wrote many important works on the countries he had visited, of which the most valuable were *Amœnitates Exoticæ* (1712) and *History of Japan and Description of Siam* (1727). All his other mss. are in the British Museum and have never been published.

KAMPTULICON, *kämp-tū'li-kon*: kind of floor-cloth, said to be made of india-rubber and cork; much of it, however, consists of oxidized linseed oil and cork. The cork is reduced to a state resembling very fine sawdust, and kneaded up with the real caoutchouc, or with the artificial kind made of oxidized linseed oil, the whole being kept very soft by heat. The mass is then made into sheets by passing through cylinder rollers heated with steam. The sheets, when cold, are ready for use, when no ornamental surface is required; but very excellent designs may be painted on it as on ordinary floor-cloth. K., notwithstanding the ease with which it is made, is more expensive than the oil-cloth made by painting hempen or linen fabrics, it has, however, qualities which render it very valuable for special purposes; its elasticity to the tread makes it agreeable to the foot; and it is noiseless, consequently well adapted for hospital passages and other positions in which quiet is desirable; it is also impervious to damp, and thereby well suited to damp stone floors. See LINOLEUM: FLOOR-CLOTH.

KAMPYLITE, n. *kām'pī-lit* [Gr. *kam'pulos*, curved]: an arseniate of lead, occurring in hexagonal prisms of a fine orange-yellow.

KAMSIN, or KHAMSIN, n. *kām'sin* [Ar. *khamsin*, fifty]: a hot, dry, southerly wind, common in Egypt and the deserts of Africa; the simoom—so named because blowing for about fifty days, from Easter to Pentecost.

KAMTCHATKA—KANAGAWA.

KAMTCHATKA, or **KAMCHATKA**, *kâm-chât'ka*: great peninsula, forming the s.e. extremity of Siberia; extending in lat. 51° – 60° n., and in long. 155° $40'$ – 164° $20'$ e. 725 m. long, and averaging 190 m. in breadth; area estimated 237,266 sq. m. K. has its continuation first in the Kurile Islands, then in the larger islands of Japan. A chain of volcanic mountains traverses the centre of the peninsula, and gives rise to the rivers, of which the Kamtchatka is 150 m. in length. There are about 14 volcanoes, the most remarkable of which—Klutchevsky—is 15,040 ft. high. This mountain now emits only smoke and embers; but in former times, eruptions occurred every seven or eight years. The soil, in general, is stony; but there are many tracts of mountain-slope which are arable. Agriculture is much hindered by untimely frosts, periodical rains, and sometimes by multitudes of mice and rats. The bread required by the inhabitants of the fortresses of Petropaulovsk and Tagil is supplied from Okhotsk. The winters are cold, and snow lies deep in many parts. The principal occupations of the inhabitants are fishing and hunting. The most valuable domestic animal is a peculiar kind of dog which never barks. K. was annexed to Russia at the end of the 17th c., after the expedition of the Cossack chief Atlasof. The population is composed of Kamtchadales (numbering about 2,000.), Kourdetri, Omototzi, and Russians. The Kamtchadales—the preponderating race of the inhabitants—live mostly in the south. They are small in stature, with large head, broad face, black hair, small eyes, broad shoulders, hanging lips, and protruding stomach. Formerly, they lived in tents made of branches; they now dwell in huts. They have nominally embraced Christianity, but retain much of their savage nature and superstitions. Nijni-Kamtchatsk, chief town, is on the river Kamtchatka. The fort of Petropaulovsk, with a fine harbor covered with ice during only a brief period of the year, is most picturesquely situated, and has a healthful climate. Pop. of K. 5,000.

KAMYSHIN, *kâ-mê-shên'*, or **KAMUISHIN**: town of Russia, govt. of Saratov, 120 m. below the town of Saratov on the right bank of the Volga; lat. 50° $5'$ n., long. 45° $25'$ e. It has considerable trade in corn. Pop. (1880) 16,710.

KANAGAWA, *kâ-nâ-gê'wâ*: town of Japan, the shipping port of Yedo; with Hakodadi and Nagasaki opened by treaty to foreign commerce. It is on the n. edge of a bight on the w. side of the great bay of Yedo, and about 16 m. from Yedo. Here was located for a time the official section of the foreign community which, through the maneuvers of the Japanese, was established, not at K., but at Yokohama, on the opposite point of the bay, and in a more isolated situation: see **YOKOHAMA**. K. has a larger foreign trade than any other port of Japan. In 1879 the imports amounted to \$23,316,000; the exports, to \$18,880,000. The chief imports are cotton and woolen

KANAKAS—KANE.

goods; the chief exports, silk and tea. In 1872, K. was lighted with gas. Pop. (1881) 107,624.

KANAK'AS: see COOLIE.

KANANÚR': see CANANORE.

KANARIS, KONSTANTIN: see CANARIS.

KANA'WHA, GREAT: see GREAT KANAWHA.

KAND, or CAND, n. *känd*: a term among Cornish miners for fluor-spar.

KANDAHAR': see CANDAHAR.

KANDAVU: one of the Fiji Islands (q.v.).

KANDELE, n. *kân'dêh-lêh*, or KANTELE, n. *kân'têh-lêh* [Finn.]: ancient minstrel's harp of the Finns; also a species of dulcimer, having five strings, in use among the same people.

KANDY, or CANDY, *kân'dê*: town in Ceylon, former cap of the kingdom of K.; 75 m. from Colombo. Pop. 3,000. See CEYLON.

KANE, *kân*, ELISHA KENT, M.D.: 1820, Feb. 3—1857, Feb. 16; b. Philadelphia: Arctic explorer. He entered Virginia Univ. 1836; afterward studied medicine, and entered the navy as surgeon, visiting China, India, E. Indies, and, under leave of absence, Arabia, Egypt, Greece, and western Europe. Soon after returning home, he was ordered to the w. coast of Africa 1846, May; but being attacked by fever, was compelled to return in the following April. He was then transferred to the military staff, and served in Mexico. 1850, May, he commenced his career of Arctic discovery as surgeon, naturalist, and historian to the first Grinnell expedition: see GRINNELL, HENRY. In the spring of 1853, he was again sent out, this time as commander of a second Grinnell expedition, in which he achieved important results, detailed in his *Second Grinnell Expedition in Search of Sir John Franklin* (2 vols. Phila. 1856). His incessant activity and his great intelligence made his explorations of much value; though it is now generally conceded that his theory of an open polar sea is only partially true—his mistake resulting from the fact that the constantly shifting ice-fields occasionally leave open spaces of water. On his return, in the autumn of 1855, honors were showered on the fortunate adventurer; he received gold medals from congress and the N. Y. legislature, and from the queen of Great Britain, and the Royal Geographical Soc. of London; but his health, precarious since 1844, was rapidly failing, and after a visit to London, where he grew rapidly worse, he sailed to Havana, where he died. His life has been written by W. Elder, M.D. (8vo, Phila. 1857).

KANE, Sir ROBERT, M.D.: chemist: b. 1810, Dublin. He was educated for the medical profession, and was received 1832 as a member of the Royal Irish Acad., and in the same year projected the *Dublin Journal of Medical Science*, which at first treated only of chemical and pharmica subjects. In 1840 he received the gold medal of the Royal Soc. of London for researches into the coloring matter

KANGAROO.

of lichens; 1844-47, K. was prof. of nat. philosophy to the Royal Dublin Soc., and received 1847 the Cunningham gold medal of the Royal Irish Acad. for discoveries in chemistry. In 1846 he was pres. of Queen's College, Cork, resigning 1864. His important works are—*Elements of Chemistry* (1841-2, 49); *Industrial Resources of Ireland* (1844).

KANGAROO, n. *käng'gǎ-rô* [a native Australian name signifying literally, 'I don't understand,' said to the English who asked the name of the animal, and which was mistaken for the animal's name], (*Macropus*): genus of marsupial quadrupeds of which there are many species, almost all Australian, though a few are found in New Guinea and neighboring islands. The genus, which some naturalists subdivide, is the type of a family *Macropidæ*, including also the Kangaroo-rats or Potoroos (q.v.), which have canine teeth in the upper jaw, while the kangaroos have no canine teeth, and in their dentition generally, and in their digestive system, make a nearer approach than any other marsupial quadrupeds to the ruminants; the potoroos, on the other hand, approaching the rodent type. Kangaroos are said sometimes to ruminate. The stomach of kangaroos is large, and is formed of two elongated sacs. They are entirely herbivorous. The *Macropidæ* all are characterized by great length of hind-legs, while the fore-legs are small; but the radius allows a complete rotation of the fore-arm; and they make use of the fore-feet as organs of prehension, and for many purposes with great adroitness. The fore-feet have five toes, each armed with a strong curved nail; the hind-feet have four toes—one very large central toe, with a very large solid nail. The hind-feet are very long, through an extraordinary elongation of the metatarsal bones. The tail is very long, thick, strong, and tapering, and is of great use in balancing the animal in its leaps, and also for sustaining the body in its ordinary erect sitting posture, in which it uses the hind-legs and the root of the tail as a tripod. In this posture, also, it usually walks by the hind-legs alone. The head is in form somewhat like that of a deer; the ears are moderately large, and oval; the eyes large, and the aspect is mild.

The GREAT K. (*M. giganteus*) is generally about 7½ ft. in length from the nose to the tip of the tail, the tail being rather more than three ft. in length, and fully 12 inches in circumference at the base. The height of the animal is rather more than fifty inches, in the erect sitting posture above mentioned; but it sometimes raises itself on its toes to look around it, and its height is then greater than that of a man. The WOOLLY K. or RED K. (*M. laniger*) rather exceeds it in size. The Great K. was discovered in Cook's first voyage, 1770, June 22, and until that time it may almost be said that kangaroos were unknown to Europeans, though a New Guinea species (*M. Brunii*) had been described by Le Brun 1711. It is of grayish-brown color, the fur moderately long and soft. It is found in many parts of Australia and in Van Diemen's Land. It sometimes attains a weight of more than 160 lbs. Its flesh is highly esteemed,

KANGAROO APPLE—KANGAROO GRASS.

and it is much sought after; but kangaroos are still very destructive to pastures in New S. Wales and S. Australia. It is not properly gregarious. The kangaroos are all timid animals, making their escape from their pursuers by extraordinary leaps. The Great K. often proves too swift for greyhounds. When driven to bay, it sometimes kills a dog by a single



Great Kangaroo (*Macropus giganteus*).

stroke of its hind leg, the great nail ripping him open at once. Some of the kangaroos inhabit open plains, some are generally found in forests, some are frequent on the snowy summits of the highest Australian mountains. They are of very various size; some are not much larger than a rabbit. They are easily tamed, and some species have bred in zoological collections.

For the exceedingly immature state in which young kangaroos are born, and for the manner in which they are nourished, see MARSUPIATA. Ere they finally desert the pouch of the mother, the young may be seen poking their heads out of it, and nibbling the herbage among which she moves.

KANGAROO' AP'PLE: species of *Solanum* (q.v.), (*S. laciniatum*), with somewhat shrubby succulent stem, smooth pinnatifid or entire leaves, and lateral racemes of flowers; native of Peru, New Zealand, Australia, and Tasmania, in which latter countries its fruit is called kangaroo apple, and is used as food. When unripe, it is acrid, and produces a burning sensation in the throat; but when perfectly ripe, it is wholesome.

KANGAROO' GRASS (*Anthistiria australis*): the most esteemed fodder-grass of Australia. It grows to a height much above that of the fodder grasses of Britain and the United States, affords abundant herbage, and is much relished by cattle. The genus is allied to *Andropogon*, and

KANGAROO ISLAND—KANKAKEE.

has clusters of flowers with an involucre. The awns are very long and twisted, both in the K. G. and in a nearly allied species, *A. ciliata*, one of the most esteemed fodder-grasses of India.

KANGAROO ISLAND: in Indian Ocean, off S. Australia; lat. 36° s., long. 137° e.; 95 m. in length e. to w., 25 m. in width n. to s., 1,970 sq. m. It has abrupt, indented shores, numerous hills covered with low, thick brushwood, and many shallow salt lakes. It was discovered by Capt. Flinders, and named from the animal that abounds there; and is now visited chiefly by whale and seal fishers. Pop. about 300.

KANG-HOA, or KANG-WA: mountainous island in the Yellow Sea, off Corea, near the mouth of the Han-Kang river; lat. 37°—38° n., long. 126°—127° e.; about 20 m. long and 10 m. wide, 160 sq. m.; chief town Kang-hoa. It has a fertile soil which yields large quantities of tobacco, rice, sorghum, maize, barley, beans, cabbage, and chestnuts, has been the refuge of the royal family in times of war for many generations, and for centuries was a favorite haunt of Chinese pirates. The last Europeans were expelled from the island 1866, and the same year the French govt. sent an expedition to K. under Admiral Roze to avenge the murder of the French missionaries. The city of K. with its important milit. establishments was destroyed, but no concessions were obtained from the govt. In the following year the U. S. govt. sent an expedition under Com. Schufeldt to remonstrate with the native authorities for the burning of several American vessels by the Coreans, but this accomplished nothing. In 1871 another U. S. naval force was sent there under Admiral Rodgers, who attempted to sail up the river to the Corean capital June 1, to demand reparation from the govt., but was fired on by the Coreans. The Americans returned the fire and soon silenced the forts. A few days afterward Admiral Rodgers made an attack on the forts on the K. side of the river and captured and dismantled five, but gained no further advantage. In 1875 a Japanese gun-boat stopped at K. for water and was fired on by the garrison. The following day she bombarded and captured the fort, and this act led to the Karoda treaty by which Corea made important concessions to Japan.

KANIZSA, NAGY, nōdj kōh' nē-shōh ('Great'): market-town, formerly an important fortress in Hungary, county of Szalad, 120 m. s. of Vienna, with which it is connected by railway. It has several churches, a monastery, town-house, etc. There are periodical markets largely attended, and considerable trade in cattle. Pop. (1880) 18,398.

KANIZSA, kōh' nē-shōh, O- (Old): market-town in Hungary, county of Bacs, in a fertile district on the Theiss, 15 m. s.s.e. of Szegedin. It has several churches, a synagogue, high-school, etc., and a trade in corn and cattle. Pop. (1880) 13,069.

KANKAKEE, käng-ka-kē': city, cap. of Kankakee co., Ill.; on the Kankakee river at the junction of the Ill. Cen-

KANKARI—KANSA,

tral and the Cincinnati Lafayette and Chicago railroads; 56 m. s.w. of Chicago. It is in a rich farming and grazing country; has extensive coal-fields, beds of bog-iron ore, and two excellent stone-quarries near by; has several paper, planing, oil, and flour-mills run by water-power, also sock, woolen, button, leather, and carriage factories; and contains 13 churches, a public-school building that cost \$60,000, 1 national bank (cap. \$50,000), 2 private banks, and a public library. Pop. (1880) 5,651.

KANKARI, *kán'ká-rê*: town of Asia Minor, pashalic of Anatolia, 65 m. n.e. of Angora, on an affluent of the Kizil-Irmak. There are barracks, and a castle on a neighboring height. Pop. about 18,000.

KANO, *ká-nô'*: great manufacturing and mercantile town, capital of the province of K., in the state of Houssa, central Africa; lat. 12° 2' n., and long. 8° 22' e.; about 230 m. e. of Sokoto, 360 m. w. of Kuka. The province is estimated to contain 500,000 inhabitants, and from its beauty and wealth, has been called the 'Garden of Central Africa.' The wall which surrounds the town of K. is 15 m. in circuit, and between it and the town, which is circular in shape and about 3 m. in diameter, a space intervenes large enough to supply the inhabitants with corn in case of siege. The houses are of clay, with flat roofs; or round huts with conical tops. The industry consists chiefly in the weaving and dyeing of cotton cloths, which are exported from K., far and near, to the value of abt. \$150,000 annually. About 20,000 loads of natron pass through the town yearly from Bornu to Nupe; and about 5,000 slaves are annually exported. Pop. of town 30,000.

KANSA, in Hindu Mythology: king of the race of Bhoja, notorious for enmity toward the god Krishna (see VISHNU).

KANSAS.

KANSAS, *kän'sas*: state, one of the United States of America; 21st in order of admission into the Union; ranking (1880) 20th in population, 17th in agriculture, 24th in manufactures, (1886) 5th in cattle, corn, and rye, 7th in hay, 9th in hogs, horses, wheat, and coal; known as 'the Garden of the West,' and named from the Kansas river, Indian, 'Smoky Water.'

Location and Area.—K. is geographically the central state in the American Union; lat. 37° — 40° n., long. 94° $38'$ — 102° w.; bounded n. by Neb., e. by Mo., s. by Ind. Terr., w. by Colo.; length 400 m., width 200 m.; Missouri river frontage 150 m.; 82,080 sq. m. (53,531,200 acres); greatest elevation above the sea 3,175 ft., lowest 648 ft.; cap. Topeka.

Topography.—The surface in general is an undulating plateau, gradually trending from w. to e., with numerous hills 50–300 ft. high, and large tracts of rolling prairie, but no mountains. There are no lakes in K. worthy of notice, but the state has an excellent system of natural drainage in the Missouri, Kansas, and Arkansas rivers and their numerous tributaries. The n.e. and part of the n. are drained by the Missouri—which forms part of the e. boundary—and several affluents—the Republican, one of the branches of the Kansas river (400 m. long), Saline (200 m.), Solomon (300 m.), Big Blue (125 m.), and Grasshopper (75 m.); the centre by the Kansas (150 m.), and its Smoky Hill branch, which together traverse the entire length of the state; the s. by the Arkansas, which traverses nearly three-quarters of the state and has a tortuous flow (500 m.) in it, Walnut, Little Arkansas, and Pawnee Fork; the s.e. by the Neosho (200 m.), Osage (125 m.), and the Verdigris; and the extreme s.w. and along the s. boundary by the Cimarron and a number of tributaries of the Arkansas river. The e. and centre portions of the state are the best watered, in the more elevated w., water is less abundant and irrigation is resorted to in some regions. Most of the small streams are fed by perennial springs, and the greater part of the year's rains fall at the time when most beneficial—when grain and grass are up.

Climate.—The climate is pleasant, healthful, temperate; severe cold in winter is common but of short duration; summer heat, intense at midday, is not prostrating, owing to a continual breeze, which cools measurably in the evening; summer range of temperature 80° — 100° , average annual rainfall 44.09 in.; average rainfall Mar. 1—Oct. 1, 34.15 in.; winter winds from the n.w., summer from the s.w. The atmosphere is remarkably clear the year round, and the state is recommended by physicians to people suffering from consumptive and severe bronchial affections.

Geology.—The Carboniferous system prevails in the e., covers a tract 208 m. long by 107 m. wide, with thickness varying from 403 to 600 ft., and comprises two strata, one 300 ft. below the surface, the other 400 ft. Excellent bituminous coal is taken from each, but the lowest stratum yields the best quality. In many places the system crops out of the surface. Coal is mined in nearly 30 counties.

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In 1885 the product was 30,001,427 bushels; (1886) 34,750,000; (1887) 39,251,985, in mining which, 4,728 miners and 870 day laborers were employed. Going w. the Permian system is first met, with its strata of magnesian limestone and gypsum, the system having a supposed depth of 700 ft. and width of 50 m.; then the Triassic, with limestone, sandstone, selenite, and marls; and lastly the Cretaceous, carrying chalks and native quicklime, and abounding in well-preserved fossils, many of species but recently known, and others still unknown to science. Lead, zinc, alum, mineral paints, and numerous varieties of marketable building stones abound. In 1880 K. produced 13,000 bushels of salt from her springs and saline marshes. In 1887 rock salt was first struck at a depth of 730 ft., at Ellsworth, then at Hutchinson (q.v.), n. of the Ark. river at 450 ft., next at Kingman, at 665 ft., and subsequently at Lyons, at 785 ft., and at Anthony, at 925 ft. Early in 1888 salt was found at Nickerson, Great Bend, and Stirling. The first 'salt blocks' were erected at Hutchinson, and the rock salt industry was begun 1888, Mar. 15. This rock salt, obtained from the former 'Great American Desert,' is apparently inexhaustible in quantity, and repeated analyses show it to be almost absolutely pure, averaging 95-98 per cent. in purity. The soil of K. is in general a black clay loam carrying vegetable mold; 2-10 ft. deep on bottom lands, 1-3 ft. on uplands; lighter in color and deeper in the w. than in the e.; easily cultivated, quite free from stones, and exceeding productive; and exceptionally adapted to agriculture and grazing. Timber is abundant along the rivers in the e. part of the state, very scarce in the w., and between these extremes in the central. The noticeable varieties are oak, elm, black walnut, cottonwood, mulberry, willow, hickory, sycamore, box, white ash, elder, and locust. Fruit trees thrive finely in nearly all parts, particularly the apple, pear, peach, plum, and cherry; smaller fruits likewise thrive in the soil and climate; and grapes yield plentifully with but little care.

Zoology.—The early denizens of the 'Great American Desert' have become almost extinct, especially within the limits of K. The great herds of buffalo which formerly overran the plains have disappeared from there and from nearly everywhere else, the elk has sought quieter regions, and but few deer, antelopes, black and brown bears, and panthers—once very common—are now found. There is still abundance of rodents and small game, several varieties of snake, about 300 species of birds, and more than 20 species of food fish in the rivers.

Agriculture.—In 1880 K. had 138,561 farms, comprising 10,739,566 acres of improved land, which with fences and buildings were valued at \$235,178,936. Farming implements and machinery were valued at \$15,652,848; live stock \$60,907,149. The estimated value of all farm productions, sold, consumed, or on hand, for the preceding year was \$52,240,361. In 1887 the winter wheat product was 8,614,244 bushels; spring wheat, 662,257 bushels, or a total of 9,278,501, value of winter wheat \$5,352,562, spring

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wheat \$406,986, total \$5,759,548. Corn yielded 75,791,454 bushels, valued at \$26,836,422; barley, 414,540 bushels, value \$165,816; oats, 46,727,418 bushels, value \$12,232,243; buckwheat, 63,435 bushels, value \$47,576; Irish potatoes, 9,178,240 bushels, value \$6,883,680; sweet potatoes, 501,600 bushels, value \$419,745; sorghum, 96,432 acres planted, 2,731,100 gallons of syrup made, value \$1,103,345, beside 69,121 bushels planted for forage, value of yield \$1,794,555; castor beans, 405,488 bushels, value \$364,939; flax, 1,400,741 bushels, value \$1,190,629; broom corn, 42,066,600 pounds; and hay, 1,016,882 tons, value \$4,765,901, beside 522,649 tons of tame, and 2,381,964 of prairie hay; cotton, 1,639 acres, 400,750 pounds, value \$32,780; tobacco, 444,000 pounds, value \$44,400; wool, 2,664,319 pounds, value \$479,577; cheese, 496,604 pounds, value \$59,592; butter, 27,610,010 pounds, value \$4,323,403; and honey, 257,780 pounds, value \$53,374. The live-stock comprised 684,037 horses, 692,858 milch cows, 538,767 sheep, and 1,847,394 swine; and the animals slaughtered or sold for slaughter during the year were valued at \$30,447,801. In 1888 the area sown in wheat was 1,336,427 acres, an excess of 257,484 acres over 1887; the farms were valued at \$453,220,155, and implements \$8,432,534; and there were 700,723 horses, 92,435 mules and asses, 742,639 milch cows, 1,619,849 other cattle, 402,744 sheep, and 1,433,245 swine. In 1889 the oat crop was expected to yield 65,659,804 bushels from 1,989,388 acres sown.

Manufactures.—K. had (1880) 2,803 manufacturing establishments, employing 12,062 hands, using a capital of \$1,1192,315, paying in wages \$3,995,010, using materials valued at \$21,453,141, and yielding products valued at \$30,843,777. The chief industry according to capital employed was the manufacture of flour and grist-mill products, which employed a capital of \$3,935,828, paid wages \$520,300, materials \$10,286,121, and received \$11,858,022 for products. Next was slaughtering and meat-packing, which employed a capital of \$1,669,400, paid wages \$263,600, materials \$4,320,802, and received \$5,618,714 for products. Then followed foundry and machine-shop products, capital \$463,300, wages \$304,874, materials \$386,208, products \$889,294; iron and steel, capital \$450,000, wages \$166,500, materials \$734,245, products \$1,004,100; saddlery and harness, capital \$338,605, wages \$155,877, materials \$468,383, products \$835,934; tin ware, copper ware, and sheet iron ware, capital \$299,675, wages \$135,939, materials \$332,617, products \$629,603; printing and publishing, capital \$289,565, wages \$197,862, materials \$212,350, products \$519,597; furniture, capital \$282,245, wages \$153,432, materials \$232,300, products \$512,089; sawed lumber, capital \$262,975, wages \$66,757, materials \$447,449, products \$682,697; and carriages and wagons, capital \$247,500, wages \$217,364, materials \$357,920, products \$745,800.

Commerce.—K. has no direct foreign trade, but a large internal and interstate traffic. It constitutes one internal revenue district, and 1888-9 paid the govt. \$183,432 in revenue.

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Railroads.—The first railroad in K. was completed 1865 and was 40 m. long. In 1875 the mileage had increased to 2,150, and 1885 to 4,064 of main track and 489 of siding, total 4,553 m. In 1888 there were 8,799 m. of main track and 899 of siding, total 9,698, and the assessed value of all railroad property was \$52,829,664.

Religion.—In 1885 there were about 2,000 churches in K. divided among about 35 sects, of which (as reported) the Meth. Episc. had 309 ministers, 220 churches, 40,430 members; Bapt. 397 churches, 16,631 members; Presb. 221 churches; Congl. 156; Lutheran 139; Christian (Disciples) 125; and Rom. Cath. 120. Later reports showed that the Meth. Episc. church had 3 conferences, 14 districts, 390 local preachers, 459 churches, 45,160 full members, church property worth \$1,153,791, 629 Sunday-schools, 6,887 officers and teachers, and 50,497 scholars; the Bapt. 28 associations, 346 ministers, 628 churches, 29,738 members, 273 Sunday-schools, 2,344 officers and teachers, 18,311 scholars, and church property worth \$712,575; the Presb. Church of the U. S. A. 7 presbyteries, 232 ministers, 373 churches, 21,257 members, 307 Sunday-schools, 3,151 officers and teachers, and 20,735 scholars; the Congl. 168 ministers, 198 churches, 10,965 members, and 13,844 Sunday-school scholars; and the Rom. Cath. 3 dioceses, 3 bishops, 148 priests, 249 churches and missions, 2 colleges, 6 academies, 62 parochial schools with about 5,000 scholars, 2 other schools, 2 convents, 4 hospitals, 2 orphanages, an emigration soc., and societies and sodalities in nearly every parish. The Prot. Episc. Church had 1 diocese, 31 ministers, 92 parishes and missions, 1,691 families, 2,169 communicants, 176 Sunday-school teachers, 1,379 scholars, 1 college, 1 theol. school, 1 hospital, and 1 diocesan periodical; the Meth. Prot., 40 ministers, 16 churches, 1,657 members, 42 Sunday schools, 391 officers and teachers, 1,919 scholars, and church property worth \$26,560; the Free-Will Bapt., 7 quarterly meetings, 31 ministers, 30 churches, and 625 members; the Universalist, 16 parishes, 11 churches, 328 families, 332 church members, 8 Sunday-schools, 461 scholars, and church property worth \$27,200; and the Seventh-Day Adventist, 4 societies, 2,000 church members, 82 Sunday-schools, and 2,294 scholars. The Lutheran Church supports a college and normal institute at Lindsborg, and an orphan asylum at Mariédahl.

Education.—In 1880 there were 340,647 children of school age (5-21) in the state, of whom 231,434 were enrolled pupils, and of these 144,343 were in average daily attendance. There were 5,315 school buildings and 6,619 teachers. The total expense of the public schools for the year was \$1,819,561. In 1888 the school population had increased to 532,010, enrolled pupils to 403,351, average daily attendance 145,881, school buildings 8,166, teachers 11,310, value of school buildings \$8,608,202, receipts for school year \$5,265,613, expenditures \$4,703,647. In 1886-7 there were 10 colleges and universities, 12 instructors and 1,249 students in the preparatory dept., a faculty aggregate of 115, with 7 additional instructors and lecturers and 792

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students in the collegiate dept.; amount of productive funds \$431,000, income from the same \$29,350, receipts from tuition fees \$29,935, from state appropriations \$33,700, other sources \$5,200, total income \$98,185; 1 endowed professorship; 17 scholarships; 38,010 bound vols. in college libraries; and grounds, buildings, and apparatus valued at \$1,200,000. The Univ. of K. at Lawrence, had 146 students in the preparatory dept., 22 instructors and 202 students in the undergraduate dept., 2 professional schools with 11 professors in faculty and instructors and 69 students; 10,000 bound vols. in its library, \$175,000 in productive funds, grounds, buildings, and apparatus valued at \$500,000, income from productive funds \$9,000, tuition fees \$4,012, state appropriation \$33,700, total income \$46,712, degrees conferred at last commencement 34. The K. State Normal School at Emporia, opened 1865, had \$21,100 total income, 12 instructors, 501 students, model school, 3 and 4 years' courses, 40 weeks in scholastic year, and 2,000 vols. in its library. Connected with this institution is a kindergarten, which had 3 teachers and 51 pupils between the ages 3-7 years, and there was a private kindergarten at Lawrence. There was also a normal college and business institute at Fort Scott, opened 1879, which had 14 instructors, 580 students, no model school, 4 years' course, 42 weeks in scholastic year, 800 vols. in the library; and grounds, buildings, and apparatus valued at \$15,000. In 1887, 87 normal institutes were held in the state. The K. State Agricultural College, endowed with national land grant, had 20 instructors and 471 students in the collegiate dept., 8,922 vols. in the library; grounds, buildings, and apparatus valued at \$220,588, productive funds \$499,786, income from the same \$32,253, state appropriation \$5,800, tuition fees \$674, total income \$38,727, degrees conferred at last commencement 26. A building for the dept. of natural history of the Univ. of K. that cost \$50,000 and has exceptionally rich museums illustrative of botany, zoology, and geology, was dedicated 1886, Nov. 16; two new buildings for Washburn College, Boswell Memorial Library, cost \$20,000, and Hallbrook Hall for young women, cost \$10,000, were completed 1887; and Stuart Hall, a memorial of Mrs. Robert L. Stuart, of New York, who gave the college \$10,000, was added to the College of Emporia 1887.

The various colleges of liberal arts are; St. Benedict's College, Atchison, organized 1859 (Rom. Cath.); Baker Univ., Baldwin City, 1858 (Meth. Episc.); College of Emporia, Emporia, 1883 (Presb.); Highland Univ., Highland, 1858 (Presb.); Univ. of K., Lawrence, 1866 (non-sect.); Lane Univ., Lecompton, 1862 (Unit. Breth.); Ottawa Univ., Ottawa, 1865 (Bapt.); St. Mary's College, St. Mary's, 1869 (Rom. Cath.); K. Wesleyan Univ., Salina, 1886 (Meth. Episc.); and Washburn College, Topeka, 1865 (Congl.).

The Univ. of K. had (1889, Jan. 1) 30 professors and instructors, and 843 students; the State Agricultural College 25 instructors, and 359 students; and the State Normal School 14 instructors, and 660 students. The charitable institutions of the state comprise an institution for the

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blind, institution for the deaf and dumb, reform school, soldiers' orphans' home (opened 1887, July 1), asylum for idiotic and imbecile youth, and insane asylums at Topeka and Ossawatimie. The industrial reformatory at Hutchinson authorized by the legislature 1885 is now (1889, Dec.) nearly finished.

Illiteracy.—Persons 10 years old and upward enumerated 704,297, unable to read 25,503, unable to write 39,476, whites unable to write 24,888; foreign-born whites enumerated 104,741, unable to write 7,063; whites 10–14 years old enumerated 114,839, unable to write 5,441, males 3,319, females 2,122; whites 15–20 years old enumerated 110,756, unable to write 2,352, males 1,430, females 922; whites 21 years old and upward enumerated 447,526, unable to write 17,095, males 7,998, females 9,097; colored persons 10 years old and upward enumerated 31,176, unable to write 14,588; colored 10–14 years old enumerated 5,625, unable to write 1,638, males 889, females 749; colored 15–20 years old enumerated 5,236, unable to write 1,452, males 728, females 724; colored 21 years old and upward enumerated 20,315, unable to write 11,498, males 5,623, females 5,875.

Finances and Banking.—K. had a bonded debt 1889, Jan. 1, of \$803,500, of which the permanent school fund held \$537,500, State Univ. fund \$9,000, sinking fund \$1,000, and individuals and corporations \$256,000. In 1889, July, there were 162 national banks (cap. \$12,910,000), 258 state banks (cap. reported \$10,320,390), and 296 private banking, loan, collection, and exchange offices. Savings banks are classed as state banks, but all of them do not report amount of capital or deposits.

History.—The site of the present state of K. was visited and traversed by a Spanish exploring expedition under Francisco Vasquez de Coronado 1541. and by a French exploring party under Dutisne 1719. The part e. of the 100th meridian was acquired by the United States by purchase from France 1803, being included in the La. territory, and the remainder by treaty from Mexico 1848. During this interval the e. part formed a portion of La. Terr. and Mo. Terr. at different times. In 1820, when political parties were excited over the bill to admit Mo. Terr. as a state into the Union, congress passed an act designed to be a compromise between the slavery and anti-slavery advocates and containing a clause forever prohibiting slavery in all the territory acquired from France n. of lat. 36° 30' n., excepting the part included within the limits of the proposed new state. Mo. was admitted in the following year as a state where slavery was permissible in accordance with the compromise bill. About this time white settlers began to take up land in the rich e. section of K. In 1825 the celebrated Santa Fé 'trail' was opened, and the consequent extension of the overland route to the Pacific made the region more widely known and began to attract to it emigrants from various states. By 1831 K. had become sufficiently opened to warrant the establishment of several Protestant missions among the Indians, and soon afterward Jesuit priests and the Russian Princess Galitzin located

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there for missionary work. The annexation of Tex. and the acquisition of a large territory from Mexico after the close of the Mexican war, stimulated the controversy in congress over slavery; and when Cal. and N. Mex. took preliminary steps to secure admission into the Union, party passion was temporarily allayed only by the famous 'omnibus bill' (see COMPROMISE MEASURES OF 1850). This excitement was followed by the movement to organize the territories of K. and Neb. As the bill contained a clause declaring the Mo. Compromise Act of 1820 to be inoperative and void in regard to the proposed new territories, and left the question of slavery to be decided by the inhabitants of the territories, the struggle of the pro- and anti-slavery parties for possession of K. and Neb. became fierce.

While the congress was engaged in a bitter contest over the bill, an emigrant aid company was incorporated by the Mass. legislature to encourage emigrants to remove to K. and to help them settle and protect themselves. The K.-Neb. Bill was adopted 1854, May 30. In July the Conn. legislature chartered an emigrant aid company, and within a few weeks the Mass. and Conn. companies were busily engaged in forwarding emigrants from the free states. The n.w. states added largely to the stream. While this movement of free state people was in progress, similar organizations were formed in Mo., Ark., and other pro-slavery states, and many colonies were planted in K., with all the constituents of human servitude. That the two forces striving for supremacy should meet in violence was inevitable. Pro-slavery associations were organized to remove from K. all emigrants who went there under the auspices of northern and free state aid societies, and a powerful soc. was formed in Mo. for the express purpose of extending slavery into K. and other territories. In an election for terr. delegate to congress and in 3 elections for members of the terr. legislature, armed bands from Mo. seized the polls and allowed a large number of illegal votes to be cast. The first legislature that assembled expelled the anti-slavery members and gave their seats to pro-slavery men. The first gov., A. H. Reeder, who had set aside the illegal returns for the legislature, was severely denounced, and after vainly attempting to intimidate him the pro-slavery party caused him to be removed on charges of corruption in purchasing Indian lands. Then the legislature adopted a most stringent pro-slavery act, which among other provisions made it a capital offense to aid slaves in escaping into or out of the terr., and required all voters to swear to support the fugitive slave law. This body designated Leecompton as the cap. of the territory. Soon after William Shannon had succeeded Reeder as gov., the free-state party held a convention at Big Springs, protested against the acts of the legislature, elected Reeder delegate to congress, held a constitutional convention at Topeka, and 1855, Nov. 12, adopted a constitution for the state of K. in which slavery was forever prohibited. This constitution was submitted to popular vote Dec. 15., when, the pro-slavery men abstaining from the polls, it was accepted.

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1856, Jan. 15, the free-state party held an election for state officers and a legislature under the Topeka constitution, and Mar. 4 the new legislature was organized and the gov., Charles Robinson, and other state officers inaugurated. On May 5 the free-state leaders were indicted by a pro-slavery grand jury for treason, in having organized a state govt. under the Topeka constitution. Lawrence, a free-state settlement, mostly of New Englanders, was a second time besieged by a large armed body of men from Mo., Ga., and Ala., enrolled as K. militia, and in spite of promises of personal and property protection on the inhabitants surrendering their arms, was plundered and burned May 21. Fatal encounters occurred at Pottawatomie May 26, and Black Jack June 2; the free-state legislature at Topeka was dispersed by U. S. troops July 4, the free-state troops captured a fortified post near Lecompton Aug. 14, Gov. Shannon returned to the free-state men the cannon captured at Lawrence for the prisoners that they had taken at Lecompton Aug. 17, and a few days later John W. Geary was appointed governor.

Pending Gov. Geary's arrival, the terr. sec. proclaimed the terr. to be in a state of rebellion and mustered an armed force at Lecompton, while ex-U. S. Senator Atchison, of Mo., gathered a second at Santa Fé. On Aug. 29 Atchison attacked Ossawatimie, held by the free-state party under John Brown, and burned it, and the next day the free-state men at Lawrence marched out to attack Atchison, but he retreated into Mo. Gov. Geary reached Lecompton Sep. 8, released the indicted free-state men on bail, called upon all armed bodies of men to disband, and promised protection to the free-state party. But the Mo. men mustered a new force of 2,000 men, and were marching with artillery to attack Lawrence, when the gov. with U. S. troops interposed and persuaded them to withdraw to Mo. After causing the removal of Chief-Justice Lecompte, Gov. Geary reported in Dec. the restoration of peace and order. 1857, Jan. 6, the Topeka-constitution legislature met at Topeka. The following day it organized, and immediately afterward the U. S. marshal arrested the pres., speaker, and a number of the leading members on a charge of having undertaken the acts of legislators without lawful appointment. As soon as this body had thus been forced to adjourn, the pro-slavery leaders convened their legislature at Lecompton and provided for holding a constitutional convention. A year previous a committee of the U. S. senate had reported that every election (in K.) had 'been controlled, not by the actual settlers, but by citizens of Missouri,' and now the house of representatives passed a bill declaring null and void the acts of the pro-slavery legislature, and also declaring that 'the said legislature was not elected by the legal voters of Kansas, but was forced upon them by non-residents.' When this bill went to the senate it was defeated, and when, later, the senate refused to recognize the removal of Chief-Justice Lecompte, Gov. Geary resigned his office. Robert J. Walker was appointed his successor.

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In June the pro-slavery men elected delegates to their constitutional convention, the free-state party abstaining from voting. In the ensuing terr. election, under assurances of protection from Gov. Walker, the free-state party cast more than double the number of pro-slavery ballots, and an attempt to overcome this majority by a falsified list of nearly 2,000 names taken from a Cincinnati directory was frustrated by Gov. Walker. The pro-slavery constitutional convention met at Lecompton, adopted a constitution which declared inviolable the right of owners to their slaves and prohibited the legislature from passing an emancipation act, and voted to submit it to popular vote on Dec. 21. Gov. Walker opposed the proposed constitution with great vigor, and even went to Washington to remonstrate against its reception by congress, but without avail. The pres. received and approved a copy before the gov. arrived, and when the latter became aware of the situation he at once resigned his office. He was succeeded by James W. Denver. On Dec. 21 the pro-slavery constitution was nominally adopted by the people, though by glaring frauds, and an election for officers under it was held 1858, Jan. 4. This constitution was again voted on by the people on the day of the state election under the Lecompton scheme, and was rejected by a large majority. At a special election directed by congress Aug. 3, this constitution was defeated again.

In 1859, Jan., the territorial legislature ordered the question of calling another constitutional convention submitted to popular vote. The result favored such a convention, and it was held at Wyandotte July 5-27. A constitution prohibiting slavery was adopted, submitted to the people Oct. 4, and by them ratified by a vote of 10,421 to 5,530. Under this, state officers and representatives in congress were chosen 1859, Dec. 6, and 1861, Jan. 29, the terr. was admitted into the Union as a free state. Through the long and bitter struggle the free-state party were the most numerous within the limits of K., but the pro-slavery minority had the material support and political sympathy of several neighboring slave states and of the federal govt. During the civil war, K. furnished more than 20,000 men to the Union army, and lost many lives and considerable property by irregular warfare. Its subsequent development and present prosperity have been remarkable.

Government.—The executive authority is vested by the constitution in a gov. elected for 2 years, salary \$3,000 per annum; the legislative in a general assembly comprising a senate of 40 members elected for 4 years, and a house of representatives of 125 members elected for 2 years, salary of each \$3 per day, mileage 15 c., biennial sessions. The judicial authority is vested in a supreme and other usual state courts. Supreme court judges are elected for terms of 6 years each, comprise a chief justice and two associate justices, and receive a salary of \$3,000 per annum each. The sec. of state receives \$2,000; treas., \$2,500; auditor, \$2,000; attor.gen., \$1,500; supt of public instruction, \$2,000; sec. board of agriculture, \$2,000; insurance com-

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missioner, \$2,500; 3 railroad commissioners, \$3,000; state librarian, \$1,500; U. S. district court judge, \$3,500; U. S. pension agent, \$4,000; U. S. revenue collector, \$2,750; 9 deputy collectors, \$400–1,650; and Indian agent, \$1,000.

The successive govts. with their terms of service are as follows: *Terr.*—A. H. Reeder 1854–5; Wilson Shannon 1855–6; John W. Geary 1856–7; Robert J. Walker 1857–8. James W. Denver 1858; Samuel Medary 1858–9; Frederick P. Stanton 1859–61. *State*—Charles Robinson 1861; Thomas Carney 1861–65; Samuel J. Crawford 1865–69; James M. Harvey 1869–73; Thomas A. Osborne 1873–77; George T. Anthony 1877–79; John P. St. John 1879–83; George W. Glick 1883–85; John A. Martin 1885–89; Lyman U. Humphrey 1889–92.

Counties, Cities, and Towns.—K. is divided (1889) into 106 counties, 23 of which were fully and one partially organized 1884–89, 5 in 1887, and 3 in 1888. The cities and towns above 10,000 pop. 1888 were Leavenworth, 35,227; Topeka, 34,199; Wichita, 33,909; Kansas City, 33,110; Atchison, 17,023; Fort Scott, 16,159; Hutchinson, 16,000; and Lawrence, 11,055.

Politics.—State, congressional, and presidential elections are held on Tuesday after the first Monday in Nov. The state govt. (1889) is republican, with a party majority of 38 in the senate, 117 in the house, 155 on joint ballot. Idiots, insane, convicts, and rebels are excluded from voting. Under the last apportionment (based on the census of 1880) K. has 9 electoral votes. Her votes for pres. and vice-pres. have been as follows: 1864, Abraham Lincoln and Andrew Johnson, 3; 1868, U. S. Grant and Schuyler Colfax; 1872, U. S. Grant and Henry Wilson, 5; 1876, Rutherford B. Hayes and William A. Wheeler; 1880, James A. Garfield and Chester A. Arthur; 1884, James G. Blaine and John A. Logan, 9; 1888, Benjamin Harrison and Levi P. Morton.

Population.—(1855) 8,501; (1860) 107,206; (1870) 364,399; (1880) 996,096; (1885) 1,268,562; (1889, Jan. 1, reported by sec. of state) 1,518,552.

KANSAS (or KAW) RIVER: draining the n. portion of the state of Kansas. It is formed in Salina co. by the junction of the Solomon river (300 m. long), and the Smoky Hill river (which has itself received an affluent 200 m. long); and from this junction flows e. abt. 175 m., receiving the Big Blue from the n., and emptying into the Missouri near Wyandotte, 750 ft. above sea level. The K. and its tributaries are not navigable.

KANSAS CITY: city in n.e. Kansas, on the boundary of Mo., directly opposite Kansas City (Mo.) and separated from it by the Kansas river, which empties here into the Missouri. The city comprises the former cities of Wyandotte and Armourdale and the villages of K. C. (in Kan.) and Armstrong, all of which were consolidated under the name of K. C., Kan., by act of legislature 1887. K. C. in Kan. is connected with K. C. in Mo. by elevated, cable, and 'dummy' railroads, and 12 bridges across the Kansas

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river; has independent gas, electric, water, and sewage works; contains several large stock yards and the principal beef and pork-packing houses of the region, repair shops of the Mo. Pacific, Union Pacific, Chicago Milwaukee and St. Paul, and Chicago Rock Island and Pacific railroads, 2 national banks (cap. \$200,000) and 7 state banks (cap. \$506,710), and numerous churches, public schools, mercantile houses, and small manufacturing establishments. Much attention was given to beautifying the city 1887-89, \$1,000,000 being spent on the roads, boulevards, bridges, etc., of the city and its suburbs 1888, and about the same sum in various public improvements 1889.—Pop. of Kansas City, Kan. (1889) 50,000.—See KANSAS CITY (Mo.).

KANSAS CITY: city in Jackson co., Mo.; on the Missouri river at the mouth of the Kansas river, and on the Mo. and Kan. boundary line; 26 m. s.e. of Leavenworth, 70 m. s. by e. of St. Joseph, 135 m. w.n.w. of Jefferson City, 325 w. by n. of St. Louis. It is in a region abounding in fertile soil, coal, lead, iron, zinc, salt, gypsum, fire-clay, and building-stone, and its location and railroad facilities on 14 lines of railroad make it the centre of the commerce of an area of nearly 900,000 sq.m., comprising w. Mo., s.w. Io., Kan., Neb., Colo., N. M., n. Ark., n. Tex., Ind. Terr., Wyo., Ariz., and Utah. It is divided into an upper or 'bluff' part and a lower or 'bottom;' is somewhat irregularly laid out; has wide streets, sewered and lighted with gas and electricity; derives its water supply from a combination of the reservoir and Holly systems; has 30 m. of cable street-car, 19 m. of 'dummy' car, and 10½ m. of horse-car lines; extends about 4 m. e. and w., 3 m. n. and s.; area about 18 sq. m. The great railroad traffic is accommodated by an enormous union depot, and a railroad and wagon bridge on seven piers across the Mo. river, erected 1868, 1,387 ft. long, costing \$1,000,000. The various street railroads connect all parts of the city, its immediate suburbs, and several neighboring towns. In 1885 there were 43 churches (60 in 1889) 25 public schools, 3 medical colleges, 2 seminaries, 2 hospitals, 2 opera houses, 3 theatres, 6 daily and 12 weekly newspapers, and public library. In 1889 there were 10 national banks (cap. \$6,800,000), 11 state banks (cap. \$685,000), 1 savings bank (cap. \$200,000), and 1 private bank (cap. \$100,000), beside 28 investment companies. During 1888 the receipts of live-stock amounted to 3,500,000 head; grain 9,325,000 bushels, wool 9,278,000 lbs., hides and pelts 11,000,000 lbs., butter 2,650,000 lbs., ores 81,500,000 lbs., pig-lead 39,750,000 lbs., bullion 100,500,000 lbs., coal 900,000 tons, hay 63,850 tons, and other products of the surrounding territory in proportion. The staple industry is beef and pork-packing, in which K. C. ranks second among American cities. A capital of about \$20,000,000 is invested in the business; the supply of beeves and hogs is chiefly from Mo., Kan., Colo., N. M., Tex., Neb., Io., and Dak.; 1,580,000 hogs were packed, and 358,000 cattle and 170,000 sheep slaughtered 1888; and 456,870,000 lbs. of products were shipped. K. C. became the great cattle market of the

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s.w. states 1868, and 1871 began to create a grain trade. The grain receipts 1883 were, wheat 9,023,472 bushels, corn 12,036,493, oats 658,779, rye 292,884, barley 36,318, which was handled by 7 elevators with storage capacity of 1,620,000 bushels. The coal industry has been developed since 1869; and since 1875 K. C. has supplied coal to all the Mo. valley as far n. as Omaha, and to all the railroads touching the Missouri river or running near it in that region. A board of trade was organized 1868, incorporated 1876; a clearing-house was established 1875; and 1885 had clearances of \$233,582,933, and a regular exchange was opened 1876. The board of trade has recently completed a building for its business at a cost of \$300,000.

In 1880 K. C. had 224 manufacturing establishments, employing 2,548 hands, using a capital of \$2,147,305, paying in wages \$1,420,713, and yielding products valued at \$6,382,681. The establishments comprise one of the largest smelting-works in the country, a large rolling-mill, several iron-foundries, 6 flouring-mills, 8 of the largest beef and pork-packing houses in the west, lead-paint and sheet-lead works, boot and shoe factories, and numerous minor works.

The real estate transfers (1885) were \$17,745,700, (1886) \$55,205,199; investments (1886) in 4,024 new buildings, \$10,535,039; business firms (1886) 5,169, employing 24 030 hands and using a capital of \$50,915,800; wholesale value of all merchandise sold \$75,896,000; assessed property valuation (1886) \$51,250,000; estimated actual valuation \$150,000,000; city debt (1886) \$965,000, (1889) \$726,089; tax rate (1889) 12½ mills on the dollar. The last of its floating debt was paid 1880, and its bonded debt is being reduced rapidly notwithstanding the large sums annually spent in public improvements and on its schools.

K. C., originally Kawsmouth (mouth of the Kaw or Kansas river) was a flourishing Osage Indian village in the day of Marquette and De Soto; the halting place of Lewis and Clarke's exploring expedition 1804; the starting point of Zebulon M. Pike's overland trip in which he discovered Pike's Peak 1806; was settled by French trappers 1822; incorporated as a town 1839; made the rendezvous of John C. Fremont's exploring expedition 1842; nearly swept away by a flood 1844; chartered as a city 1853, the scene of continual excitement and military preparation during the Kansas war 1855-6; conspicuous in the border war 1861-2; the starting point of the first railroad across the great plains and the site of the first bridge across the Missouri river; and entered on its era of prosperity 1865, Oct., when the Mo. Pacific railroad reached it. Pop. (1860) 4,418; (1870) 32,260; (1880) 55,875; (1885) 113,000; (1889, Jan. 1, estimated by the mayor) 200,000.—See KANSAS CITY (Kan.)

KANSAS INDIANS: tribe of the Dakota family and Osage branch, found by Father Jacques Marquette (q.v.) on the Missouri river between the lands of the Missouris and the Osages 1673. They became friendly with the French 1700, allowed the Jesuits to establish a mission among them

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1728, made peace with the Osages 1806, and were driven by the Sioux to new lands on the Kansas river at the mouth of the Saline about 1812. In 1815 they made a treaty of peace with the U. S. govt.; 1820 sent several chiefs to Washington; 1825 made a second treaty with the govt. and ceded all their lands in Mo. and some w. of it, retaining their Kansas river reservation; 1846 ceded other lands for money and a reservation of 20 m. sq. on the Neosho river; 1856 their half-breeds were forced from their reservation by squatters; 1861 they sent a company of warriors to the U. S. army; 1867 and 69 further treaties were made with them because of the overrunning of their reservation by settlers; and 1872 congress directed their reservation and trust lands to be sold, one-half of the proceeds to be invested for them, the remainder to be used in establishing them on the Osage reservation in Ind. Terr. They have never been induced to engage in any kind of agriculture, and have decreased in numbers from 1,500 (1815) to 285 (1885).

KAN-SU, *kân-sô'*: most n. western province of the Chinese Empire (q. v.).

KANT.

KANT, *kānt*, IMMANUEL: one of the greatest and most influential metaphysicians of all time; 1724, Apr. 22.—1804, Feb. 12; b. Königsberg, Prussia; son of a saddler, whose father had emigrated from Scotland—where the name was spelled Cant. He was educated at the university of his native town, was a private tutor, took his degree at Königsberg 1755, and began to deliver prelections on logic, metaphysics, natural philosophy, and mathematics. In 1762, he was offered, but declined the chair of poetry, and 1770 he was appointed prof. of logic and metaphysics. K's private life was uneventful, yet curious and almost ludicrous in its mechanical regularity. As Socrates could hardly be induced to go beyond the walls of Athens, so K. clung with oyster-like tenacity to the city of his birth, never leaving it during the 30 years of his professorship. He remained a bachelor all his life. K. was a man of unimpeachable veracity and honor, austere even in his principles of morality, though kindly and courteous in manner, a bold and fearless advocate of political liberty, and a firm believer in human progress. The investigations by which he achieved the reputation of a reformer in philosophy, refer not so much to particular sections or problems of that science, as to its principles and limits. The central point of his system is found in the proposition, that before anything can be determined concerning the *objects* of cognition, the *faculty* of cognition itself, and the *sources of knowledge* lying therein, must be subjected to a critical examination. Locke's psychology, indeed, at an earlier period in European speculation, had shown a similar tendency; but before K., no thinker had definitely grasped the conception of a critical philosophy, and K. himself was led to it not so much by Locke, as by Hume's acute skepticism in regard to the objective validity of our ideas, especially of the very important idea of causality. The Kantian criticism had a twofold aim: 1st, to separate the necessary and universal in cognition from the merely empirical (i.e., from the knowledge which we derive through the senses); 2d, to determine the limits of cognition.

In regard to the former of these, it is of importance to observe, that K. did not subject the old psychological doctrine of 'faculties' to any analysis, but attributed to each of these—viz., to the faculties of Sense, Understanding, Judgment, and Reason—certain innate *a priori* forms, conceptions, and functions, which, as constituting the necessary conditions of any experience whatever, possessed, on account of their subjective necessity, a universal subjective validity. Thus, in the Sense, as the faculty receptive of external impressions, there must lie, according to K., the forms of Space and Time; in the Understanding, as the faculty by which the manifold in appearance is combined in the unity of conception, the Categories; in the Reason, as the faculty of principles, the Ideas of the Unconditioned and the Absolute; in the Judgment, as far as it is not merely subsumptive, but also reflective, the conception of Design or Conformity to the purpose in view;

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finally, in the Will or the Practical Reason, the Categorical Imperative of the Moral Law.

In regard to the latter aim of the Kantian criticism—viz., to determine the limits of theoretical knowledge—the efforts of K. go to show that universal forms existent *a priori* in the human mind, can afford knowledge only under the condition that the objects which they cognize are presented by experience; while for the determining what lies beyond the limits of Experience, they are merely empty forms, by which something indeed is *thought*, but nothing *known*. Even within the limits of Experience itself, we are cognizant, according to K., through the forms of the Sense and of the Understanding, not of things as they are in themselves, but only as they appear; hence the opposition between *noumena* and *phænomena*. But when we try to transcend those limits, and to ascertain the intelligible basis of the phenomenal world by the forms of the Sense and the Categories, the *Reason* becomes entangled in an unavoidable Dialectic, for which there is no objective, but only a critical solution. The objects of this Dialectic, the carrying out of which constitutes an essential and leading part of the *Critique of the Pure Reason*, are the Soul, the World, and God; and in relation to the cosmological conceptions in particular (viz., of the Beginning and End of the World, of the Unity or Non-unity of the ultimate particles of Things, of Causality through Freedom or through the necessity of Nature), the Reason is involved in a series of self-contradictions (in the Kantian technology, *antinomies*). The result, according to K., of the critical examination of all claims to a knowledge transcending Experience in the regions of rational or speculative Psychology, Cosmology, and Theology, is the necessity for abandoning the hope of attaining such. The idea (native to the Reason) of the Unconditioned is allowed to possess a regulative, not a constitutive value; that is to say, it is a principle necessary for the extension of our inquiries beyond the fixed limits of experience, without, however, yielding us an extended knowledge. So far the philosophy of K. is purely negative and destructive. Hamilton, Mansel and others have—in regard to the limits of the knowable—merely reiterated the arguments of the great German, while in regard to the points in which they differ from him, as, for example, the *nature* of our knowledge, it is very doubtful whether they are as logical and consistent as their predecessor.

But the austere and stoical morality of K. was something too *positive* to allow him to rest satisfied with merely negative results; hence he sought in the reality of his Ethics a compensation for the nihilism of his Metaphysics. He maintained the unconditional validity of the Moral Law, and of the consequences which legitimately flow from it. This validity, however, it should be observed, is simply *moral*, and in no way demonstrates the metaphysical reality of the ideas, which, nevertheless, by a power of its own, it compels us to accept. The Reason, as operating

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in the sphere of Ethics, is called by K. the Practical Reason, or the Practico-legislative Reason. The ideas which the Practico-legislative Reason postulates are, 1st, the idea of *Freedom*; 2d, of *Immortality*, as the necessary condition for an ever-increasing approximation to the fulness of the Moral Law; 3d, of the Being of God, as the necessary condition of such a regulation of the universe as shall show the order of nature to be the expression of a moral design. Rejecting all the ontological, co-mological, and physico-theological proofs of the existence of God as mere futilities, K. based his belief in God on the inward necessities of a practical morality. Religion—i.e., the recognition of our duties as divine commands—has, in the system of K., the closest dependence on Morality; in fact, becomes identical with it. This purely ethical conception of religion led him to a criticism of the positive dogmas of theology from an ethical standpoint, in which are contained most of the elements of theological rationalism. The application of the Practical Reason, as understood by K., to *Æsthetics* and *Jurisprudence* is equally fruitful of important results. —K.'s first work *Gedanken von der wahren Schätzung der lebendigen Kräfte* (Thoughts on the True Estimation of the Active Powers), was published 1747. The principal of its successors were, *Die falsche Spitzfindigkeit der vier syllogistischen Figuren* (The false Hair-splitting of the Four Syllogistic Figures, 1762), *Beobachtungen über das Gefühl des Schönen und Erhabenen* (Observations on the Beautiful and Sublime, 1764); *De Mundi Sensibilis et Intelligibilis Forma et Principiis* (On the Form and Principles of the Sensible and Intelligible World, 1770); this is the prelude to his *Kritik der reinen Vernunft* (Critique of the Pure Reason, 1781); *Grundlegung der Metaphysik der Sitten* (Basis of the Metaphysics of Ethics, 1785), *Kritik der praktischen Vernunft* (Critique of the Practical Reason, 1788), *Kritik der Urtheilskraft* (Critique of the Judgment, 1790), and *Religion innerhalb der Grenzen der blossen Vernunft* (Religion within the Limits of Mere Reason, 1793). For an account of the influence of K., see GERMAN PHILOSOPHY. See also Caird's *Critical Account of K.'s Philosophy* (1877); Adamson, *On the Philosophy of K.* (1880); Watson's *K. and his English Critics* (1881); Hutchison Stirling's *Text-book to K.* (1881).

KAOLIN, or KAOLINE, n. *kā'ō-līn* [Chin. *ka-ling*, high ridge, or name of a hill where found; F. *kaolin*]: name given by the Chinese to the fine white clay, 'china clay,' which they use in making their porcelain. It is furnished by the decomposition of a granitic rock, the constituents of which are quartz, mica, and felspar, the latter having gradually moldered, by the joint action of air and water, into this substance. A very similar clay, to which the Chinese name has been given, occurs near St. Austel in Cornwall, England, and near Limoges in France; also in Nebraska, and several of the eastern states. In these cases mostly, it is produced by the decomposition of *Pegmatite*, a granite in which there is scarcely any mica, and very little quartz. All clays are silicates or hydrated

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silicates of alumina; and the clays named are all much valued by porcelain-makers: they are used also in paper-making and other branches of manufacture.

KAPILA, *kăp'i-la*: renowned legendary founder of the Sâṅkhya (q.v.), one of the philosophical systems of the Hindus. Prof. J. E. Hall says: 'By the prevalent suffrage of mythology, Kapila is reputed to have been a son of Brahmâ; but he is otherwise described as an incarnation of Vishnu. He is also recounted to have been born as the son of Devahûti; and again is identified with one of the Agnis or fires. Lastly, it is affirmed that there have been two Kapilas—the first, an embodiment of Vishnu; the other, the igneous principle in human disguise.'

KAPNITE, n. *kăp'nîl* [Gr. *kapnos*, smoke]: a variety of zinc-spar, containing more than 15 per cent. of iron protoxide.

KARA' GEORGE: see CZERNY, GEORGE.

KARA HISSAR': see AFIUM-KARA-HISSAR.—There are several other towns of this name in Asiatic Turkey.

KA'RAITES, or **CARAITES**: see JEWISH SECTS.

KARAK, *kâ-râ'k'*: small island of coral formation in the Persian Gulf; lat. 29° 14' n., long. 50° 20' e.; circumference 15 m. It has a fertile soil and abundance of good water, but no timber, and is inhabited by Arabs. The Dutch in the middle of the 18th c. were attracted by its safe anchorage, and built a fort on it, but were soon driven away; and the English occupied it 1839–41, and again temporarily 1856, Dec., when their expedition against Persia made a landing on the s. e. coast. Pop. 2,000–3,000.

KARAKORUM, *kâ-râ-kô'rûm* (or **MUZ-DAGH**) **MOUNTAINS**; called also *Tsung-ling*: great range in central Asia, an eastern continuation of the Hindu Kush, s. eastward along the n. frontiers of Kashmir, toward the sources of the Indus. The highest peaks are, next to Mount Everest, the highest on the globe; one marked K² in Indian survey maps being 28,278 ft. high. The name Karakorum is properly used of an important pass across the chain, the range being known there as Muz-dagh: see KUEN-LUN.—**KARAKORUM** was the name also of the old Mongolian capital, n. of the desert of Gobi, on the Selenga river: the ruins remain.

KARAMAN, *kâ-râ-mân'*, or **CARAMANIA**, *kâ-râ-mâ'nê-a*: inland region of Asia Minor, nearly corresponding with the vilayet of Konieh, n. of the Taurus Mountains. The inhabitants are nomadic Turks.—The town of K. (*Laranda*) has pop. about 20,000.

KARAMZIN, *kâ-râm-zên'*, **NIKOLAI MIKHAILOVICH**: 1765, Dec. 1—1826, May 22 (O.S.); b. Bogoroeldza, in the govt. of Simbirsk: greatest of Russian historians. His father was an officer of Tartar descent, and placed him in the army; but he soon retired from it, and applied himself to literary pursuits, and after a tour in Germany, Switzerland, and France, took part in establishing the *Moscow Journal*, and published volumes of tales, poetry, etc. But

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the work which first gained him a high reputation was *Letters of a Russian Traveller* (6 vols. Moscow, 1797-1801); it had extraordinary influence in the improvement of literary taste in Russia. After other literary attempts of no great importance, he directed his attention to the history of his country. In 1803, he was appointed imperial historiographer, with a pension of 2,000 rubles; and from this time he labored uninterruptedly at his *History of Russia* (12 vols. 1816-29). For this admirable work Emperor Alexander made him a present of 60,000 rubles. It comes down only to 1611.

KARA SEA, *ká-rá*: portion of the Arctic Ocean between Nova Zembla and the Siberian coast. Into it the great rivers Obi and Yenisei discharge; and recent attempts, promoted by Nordenskiöld and others since 1876, to establish steam communication in summer between w. Europe and these rivers give the navigability of the K. S. commercial importance.

KARASKIER, n. *ka-rās'kī-ér* [Turk.]: one of the chief officers of justice in Turkey, and a member of the Ulema.

KARASS, n. *kār-ās'*: the language spoken by the Tartars of Astrakhan.

KARASU-BAZAR, *ká rá'só-bá-zár'*: town of Russia, govt. of Taurida, in the Crimea, 25 m. e.n.e. of Simferopol. Pop. 14,000—Armenians, Greeks, Jews, and Russians.

KARATCHEFF, *ká-rát-shěf'*: town in th. n.w. of the govt. of Orel, Russia. Pop. 11,000.

KARATEGIN, *ká-rá-tā-gēn*: country of central Asia, now a province of Bokhara, bordering on the Russian province of Ferghana (Khokand) and on Kashgar. It is a highland region, traversed by the Kizil Su, a tributary of the Oxus. In winter the climate is severe; but much fruit and corn is grown. The inhabitants are mainly Persian-speaking Galtchas, of Aryan stock, and Moslems in faith, with about 5,000 nomad Kirghiz. Pop. less than 400,000.

KARCZAG, *kört-sog'*, or **KARDZSAG UJ SZALLAS**, *körd-zög'ó-ē sál-lásh'*: town of Hungary, cap. of Great Cumania; about 90 m. e.s.e. of Pesth. Pop. (1880) 15,825.

KARELIA, *kār-ā-lē'á*: old name for the s.e. part of Finland, anciently a Swedish province, but annexed to Russia by Peter the Great.

KARENGIA, *kār-ēn'jī-a* (*Pennisetum distichum*): grass closely allied to the Millets, and producing a grain of the same kind; native of central Africa, highly valued as fodder.

KARENS, *kā'rěnz*: an Indo-Chinese people allied to the Burmans, but much less civilized, though they are quite industrious, and have a higher morality than some more civilized races. Their language and features have suggested to some a Caucasian origin. They live mainly in the jungles and hilly districts of Burmah, especially British Burmah (see **TENASSERIM**) and Siam. Their numbers are variously stated at from 200,000 to 400,000. There are various tribes, some wilder than the others; some are no-

KARIKAL—KARMA.

madic. There are among them pagans and Buddhists. American missions, commenced 1828 by Boardman and Judson (Bapt.) have been very successful among them: in 1884 there were reported 463 churches, 103 ordained native preachers, 363 preachers not ordained, nearly 24,000 communicants.

KARIKAL': see CARRICAL.

KAR'LI: see CARLEE.

KARLS'BAD: see CARLSBAD.

KARLS'BURG: see CARLSBURG.

KARLSKRO'NA: see CARLSRONA.

KARLS'RUHE: see CARLSRUHE.

KARL'STAD: see CARLSTAD.

KARL'STADT: see CARLSTADT.

KARMA, n. *kār'mā*: in the *Buddhist system*, the impersonation of the inexorable, inflexible law that bound together act and result, this life and the next.

KARMATHIANS.

KARMATHIANS, *kār-mā' thī-anz* (Carmathians) [so called from Abu Said Al-Jenabi, surnamed Al Karmata]: Mohammedan sect which sprang up in the 9th c. under the caliphate of Al-Motamed, and which, by a combination of extraordinary circumstances, succeeded in establishing itself for a time as a political power which threatened to overturn the caliphate itself. The particular creed and tendencies of the Ismailis (see that title), began to be fully realized and developed about the middle of the 2d c. of the Hedjrah, through one Abdallah Ibn Maimun, oculist (kaddah) by profession, and Persian by birth. It was he first who, aided by favorable circumstances, matured a plan which, for the boldness and genius of conception, and for the energy and vigor with which it was carried out, has few parallels in history. Nothing less was contemplated than the union of the Arabic conquerors and the many races that they had subjected since Mohammed's death, and the enthronement of what afterward was called 'Pure Reason' as the sole deity to be worshipped. The advanced should be free of all so-called religious fetters, which, as symbols and allegorical actions, should be laid all the heavier on the necks of the less advanced strata of society. The 'Believers' and 'Conquerors' were to be made missionaries for unbelief, and the implements for the destruction of their own empire. Whatever the ultimate plans of Abdallah may have been, there can be no doubt about the astute way in which he set to work for the new faith. With an extraordinary knowledge of the human heart and human weakness, he offered devotion to the believer; liberty, if not license, to the 'free in spirit;' philosophy to the 'strong-minded;' mystic hopes to the fanatics; miracles to the masses. To the Jews, he offered a Messiah; to the Christians, a Paraclete; to the Moslems, a Mahdi; and to the Persian and Syrian 'pagans,' a philosophical theology. His practical exertions, and their wonderful results, soon attracted the attention of the authorities. Obligated to flee from place to place, he sought refuge successively in Karaj, in Ispahan, in Ahwaz, in Basra, finally, in Salamia, in Syria, where he died, leaving his son Ahmed his successor as chief of the sect of the Ismailis. This Ahmed, warned by the fate of his father, proceeded with greater caution, especially with regard to the name of the Imam or Great Prophet, which he left rather uncertain.

Among the missionaries that he sent to Irak, there was one Husein Ahwazi. In the province of Kufa, this missionary, according to some of the authorities, met a man named Hamdan Karmat, whom he converted to the new faith, and at his death laid his mission upon Karmat's shoulders, whom he had previously initiated into the whole extent of the faith. According to others, however, it was Husein himself, who from some cause received the name of Karamita or Karmat, a word the meaning of which is uncertain—indicating, according to some, a man who, having short feet, makes small steps; according to others, a man who has red eyes, etc.

Whoever Karmat was, he was the fittest man to carry

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out the original intentions of the founder. He very soon succeeded in gaining the full confidence of an increasing flock of disciples, and in making them blind instruments of his will. He introduced, according to some of the authorities, absolute communism, not only of property, but even of wives, and founded one particular colony of chosen converts, around his own house in Kufa. This residence of his, called the House of Refuge, became the centre of an immense conspiracy. From this place all the missionaries were sent out, and all the threads of the great movement were directed. Among the most noted of those missionaries was one Abu Saïd, who was sent first to s. Persia, and afterward to Bahrein, in the Persian Gulf.

The inhabitants of Bahrein, a former province of Persia, were partly Jews, partly Persians, who had capitulated with Mohammed, and had been allowed to retain their own creeds. After the Prophet's death they had at once shaken off the unwelcome yoke, which, however, had again been put upon them by Omar. The interior of the country was inhabited by certain Arabs, highly disaffected against Islam, the innumerable precepts of which they disliked with an intense dislike. Among such people Abu Saïd made the most marvellous strides in his conversions. In less than two years, he had brought over a great part of the people of Bahrein. In 287 Hedjrah the caliph sent an army of 10,000 men against Abu Saïd and his followers, but the latter remained victorious, and made the caliph's own general prisoner. He now gained undisputed possession of the whole country, and having destroyed the old capital Hajar, made Lahsa, his own residence, the capital of the country. While the court of Bagdad was threatened with destruction by this newly established power on one side, two chiefs of another Karmathian branch appeared, one in the neighborhood of Kufa, the other in Syria. The first was defeated, captured, and tortured to death; the other was more successful. The gov. of Damascus, who marched against him, was beaten most ignominiously. This Karmathian triumph, however, though followed by a few others, was of short duration. A decisive victory (294 Hedjrah), won by the caliph's general, Wasif, for ever put an end to this branch of the Karmathians.

Meanwhile, both Karmat and Abu Saïd had become—by what means, is matter of great obscurity—faithless to their own creed. We have no certain dates about the death of Karmat. Abu Saïd was killed, with some of his principal officers, in the bath in his own castle of Lahsa, in 301 Hedjrah, by one of his eunuchs; and four years later, his son, Abu Tahir, became his successor; and he has left his name indelibly stamped upon the annals of Islam. In 311, he seized the town of Basra. In the next year, he pillaged the caravan which went to Mecca, and ransacked Kufa. In 315, he once more reappeared in Kufa and in Irak, and gained so decided a victory over the caliph's troops that Bagdad began to tremble before him. In 317 (A.D. 930), the great and decisive blow against Mohammedanism was struck. When the great caravan of pilgrims for the annual

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pilgrimage had arrived at Mecca, the news suddenly spread that Abu Tahir, the terror of Islam, had appeared at the head of an army in the holy city itself. All attempts to buy him off failed, and a massacre of the most fearful description ensued. With barbarous irony, he asked the victims what had become of the sacred protection of the place. Every one, they had always been told, was safe and inviolable at Mecca. Why was he allowed thus easily to kill them—the race of donkeys? According to some, for 6 days—to others, for 11 or 17—the massacre lasted. The numbers killed within the precincts of the temple itself are variously given. The holy places were desecrated, irredeemably almost. But not satisfied with this, Abu Tahir laid hands on the supreme Palladium, the black stone itself.

Yet he was apparently mistaken in his calculations. So far from turning the hearts of the faithful from a worship which God did not seem to have defended, the remaining Moslems clung all the more fervently to it. God's decree had certainly permitted all those indignities to be put upon His house, but it was not for them to murmur. The stone gone, they covered the place where it had lain with their kisses. As often as Abu Tahir did not distinctly hinder them by force, the caravans went on their usual annual pilgrimage. In the year (Hedjrah) 327, the emir of the pilgrimage, Abu Tahir's own personal friend, first succeeded in persuading him to conclude a treaty by which the pilgrimage was allowed again, on payment of five denars for every camel, and seven for every horse. Yet the black stone, notwithstanding all efforts on the part of the court of Bagdad, was not returned. Abu Tahir seems altogether to have been a man of extraordinary abilities. Of his valor, with which he also knew how to imbue his followers, the following is told: When he had taken away the black stone, and desecrated the holy places, he marched, with 500 horse, upon Bagdad. The caliph Moktader sent 30,000 men, under his best general, to meet him. Having ascertained how small were the rebel's resources, the caliph sent a friendly message to him by the general himself, adjuring him, by their previous friendship, to desist from his insane attempt, and to make good his escape in time. Whereupon he asked the messenger of how many the caliph's forces consisted. 'Thirty thousand,' was the answer. 'Then go,' he said, 'and tell your master that he has sent just three men too few.' And calling for three of his own men, he commanded one of them to stab himself, the second to throw himself into the Tigris, and the third to jump over a precipice; all of which was instantly done. 'You see' he continued, 'what my warriors are like, and what numbers mean against such as these.' The following night, he made a sudden attack upon the enemy, routed them completely, and took the general himself prisoner.

Regarding the special form of belief of the K., as far as it has been preserved to us, it seems in the beginning—before Ismaëlism became that mixture of 'naturalism,' 'materialism,' of whilom Sabæism, and of Indian incarnations and transmigrations of later days—to have only been

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a kind of 'reformed' Islam. The prophet Karmat, it was held, had brought a new law into the world. By this, many of the Mohammedan tenets are altered, many ancient ceremonies are abrogated, new forms of prayer are introduced, and an entirely new kind of fast is inculcated. Wine is permitted, as well as a few other things prohibited by the Koran. Certain other of the precepts met in this book are turned into mere allegories. Instead of tithes, they gave the fifth part of their property to the Imam. Prayer is but the symbol of obedience to their Imam. Fasting is the symbol of silence, or rather of concealment of the religious doctrine from the stranger.

Abu Tahir died almost absolute master of Arabia, Syria, and Irak, in 332 Hedjrah. It was not until seven years later (A.D. 950), under the reign of two of his brothers who had succeeded him, that the 'black stone' was returned to Mecca for an enormous ransom, and fixed there, on the seventh pillar of the mosque called Rahmat (God's mercy), in the presence of the emir of the mosque and others, a Spaniard among them. Yet the K. were accused of not having returned the stone itself, or, at all events, of having broken it. Forty camels, it was also said, had been unable to carry it away; while a single one had brought it back, one, moreover, that had been lean when it started, and had become fat when it had reached Mecca.

From that time, however, the star of the K. began to wane. Little is heard of them of any import till 375 Hedjrah, when they were defeated before Kufa—an event which seems to have put an end to their dominion in Irak and Syria. In 378 Hedjrah, they were further defeated in battle by Asfar, and their chief lost his life. They retreated to Lahsa, where they fortified themselves; whereupon Asfar marched to Elkatif, took it, and carried away all the baggage, slaves, and animals of the K. of that town, and retired to Basra. This seems to have finally ruined the already weak band of that once formidable power, and nothing further is heard of them in history, though they retained Lahsa till 430 Hedjrah, and later still. Even to this day there exist, according to Palgrave, some disaffected remnants of them at Hasa (the modern name of their whilom centre and stronghold), and other tracts of the peninsula; and their antagonism against Mohammedanism, which they have utterly abrogated among themselves, so far from being abated, bids fair to break out anew into open rebellion at the first opportunity.—See Weil, *Gesch. d. Chalifen*; De Goeje, *Mémoire sur les Carmathes*, etc.; Silvestre de Sacy, *Religion des Druses*; Sale, *Koran*; Palgrave, *Arabia*, etc.

KAR'NAC: see THEBES.

KARNÁL, *kür-nawl'*: district in the Punjab, India, touching the Jumna on the e.; 2,396 sq. m. Pop. (1881) 622,621. The chief town is Karnál: pop. (1881) 23,133.

KARNÚL, *kür-nól'*: district in Madras: see KURNUL.

KAROSS, n. *kä-rös'*: a skin cloak made by the Kafirs of s. Africa.

KARPHOLITE—KARR.

KARPHOLITE, n. *kâr'fō-lit* [Gr. *karphos*, straw; *lithos*, a stone]: one of the hornblende family, occurring in fibrous tufts of a straw-yellow color.

KARPHOSIDERITE, n. *kâr'fō-sid'ér-īt* [Gr. *karphos*, straw; *sidēros*, iron]: a straw-colored mineral consisting of hydrated phosphate of iron, occurring in kidney-shaped, resinous looking concretions, resembling iron-sinter.

KARR, *kâr*, JEAN ALPHONSE: French writer: b. Paris, 1808, Nov. 24; son of a distinguished pianist. He passed with distinction through the College Bourbon, in which he afterward, while very young, became a teacher. While thus employed he fell in love, and began to cultivate the muses; and a copy of verses which he sent to the satirical journal, the *Figaro*, formed his introduction to the literary career. His verses were not accepted by the *Figaro*, but its editor asked him to send something in prose, and the result was that he became a regular contributor to the journal. Disappointed in his attachment, he revealed to the world the story of his grief in a novel *Sous les Tilleuls* (1832, 2 vols. 8vo). A youthful desire to astonish, a determination to seem original, detracted from the worth of this book, and caused many to ignore its originality; and the curious blending of irony and sentiment, of good sense and nonsense, which form the author's manner, was puzzling to simple people; but the critics declared the book charming; and the public, to whom youthful traits in a novel are never unpleasing, on the whole concurred in the verdict. Encouraged, K. soon produced a second novel, which did not diminish his reputation (*Une Heure trop Tard*, 1833); and thereafter, year after year, he produced new works, until he has become a prolific author, and a recognized popular favorite. *Fa Dièze* appeared 1834; *Vendredi Soir* 1835; *Le Chemin plus Court* 1836. He has since published *Einerley* (1838); *Geneviève* (1838, 2 vols.); *Clotilde* (1839); *Hortense* (1842); *Am Rauchen* (1842); *Pour ne pas être Treize* and *De Midi à quatorze Heures* (1842); *Feu Bressier* (1845, 2 vols.), originally published in *Revue des Deux Mondes*; *Voyage autour de mon Jardin* (1845, 2 vols.) *La Famille Alain* (1848, 3 vols.); *Histoire de Rose et de Jean Duchemin* (1849); *Les Fées de la Mer* (1850); *Clovis Gosselin* (1851); *Contes et Nouvelles* (1852).—*Agathe et Cecile*; *Fort en Thème*; *Soirées de Sainte-Adresse*; *Les Femmes*; *Raoul*; *Lettres écrites de mon Jardin*; *Au Bord de la Mer* appeared 1852-55; *Promenades hors de mon Jardin*, 1857; *La Pénélope Normande*, 1858; *La Pêche en Eau douce et en Eau salée*, and *Dictionnaire du Pêcheur*, 1860. The publication of a complete edition of his works commenced 1860. The letters and sketches which he has from time to time written from Nice, his place of residence since 1855—on horticulture, and flowers, and fishes—the pleasures of the country and the seaside—have been among the most pleasing of his works. In 1839, M. K. became chief editor of the *Figaro*, and in the same year he founded a monthly satirical journal *Les Guêpes*, which he long conducted with brilliant success, gaining high reputation as a wit and satirist, but making,

KARROO—KARSHI.

as was natural, many enemies, of whom one, a woman, made an unsuccessful attempt on his life. Several vols. of *Les Guêpes* have been reprinted; also three vols. of sketches, which, under the title *Bourdonnements*, he began to contribute to the *Siècle* 1852. K. has contributed very largely to periodicals, from which, indeed, many of his works have been republished.

KARROO, or **KAROO**, n. *kă-rô'* [Hottentot, *karusa*, hard]: name given to the immense barren tracts of table-lands, about 2,000 ft. above sea level, which occupy a large portion of the surface of the Cape Colony and the region n. of it. The karroos of s. Africa are generally composed of shallow beds of the richest clay-soil, resting on a substratum of slate rock, and lack only the fertilizing power of water to render them as productive as any other part of the surface. After heavy rains, luxuriant vegetation quickly springs up, which as quickly perishes; and the different rivers shown on maps as crossing the karroos, are generally little more than dry water-courses, with strings of standing pools in their beds. In the most barren portions the soil is much impregnated with alkaline matter. The principal karroos of the Cape Colony extend n.e. between the Roggeveld and Nieuveld Mountains and the coast ranges, forming a belt of table-land about 350 m. in length, with average width of 60 m., and inhabited by the Boers only in the winter season, when water and grass are abundant. They often rise terrace-like to considerable elevations. Within the last few years, by the introduction of merino sheep, and the construction of dams, land in the karroo is becoming more valuable.

KARS, *kârs*: lately a Turkish stronghold, now a frontier fortress of Russian Armenia, about 110 m. n.e. of Erzerum. It is on a table-land more than 6,000 ft. in elevation; the climate is therefore rather severe. The people mostly are Armenians, who carry on an active transit trade. In 1828 it was taken from the Turks by the Russians under Paskevitch. K. was brilliantly defended by the Turks under General Williams for six months 1855. At the beginning of the war of 1877-8, K. was invested by the Russians, but relieved in July by Mukhtar Pasha; besieged again in autumn, it was carried by storm 1877, Nov. 18. K., long a bulwark of the Ottoman empire in Asia, was one of the Armenian fortresses the cession of which to Russia was agreed to by the Berlin Congress 1878. The ancient citadel with the line of encircling forts 10 m. around, have no great military strength against modern assaults. Pop. of K. (1880) 8,672.

KARSHI (anc. *Nakhsheb*): second city in size and commercial importance of the khanat of Bokhara, central Asia; on the Shehri Sebz river, 90 m. s.e. of Bokhara city. K. is surrounded by cultivated land and numerous gardens. It consists of the city proper and a weakly fortified citadel, has ten caravanserais and a well-supplied bazaar, and is expected to be of great importance in the transit-trade organized between Bokhara, Cabul, and India. K. is distin-

KÂRTTIKEYA—KASHGAR.

guished for the fabrication of knives of various kinds which are exported to all parts of central Asia, as also to Persia, Arabia, and Turkey, where they sell for three or four times their cost. The inhabitants are mostly Usbeks, with a mixture of Tadjiks, Indians, Afghans, and Jews. Pop. estimated, 25,000.

KÂRTTIKEYA, *kârt-ti-kā'ya*: the Hindu Mars, or god of war, a being represented by the Purānic legends as sprung from S'iva, after a most miraculous fashion. The germ of K. having fallen into the Ganges, it was on the banks of this river, in a meadow of S'ara grass, that the offspring of S'iva arose; and as it happened that he was seen by six nymphs, the *Kr'ittikās* (or Pleiades), the child assumed six faces, to receive nurture from each. Grown up, he fulfilled his mission in killing Tāraka, the demon-king, whose power, acquired by penances and austerities, threatened the very existence of the gods. He accomplished other heroic deeds in his battles with the giants, and became the commander-in-chief of the divine armies. Having been brought up by the *Kr'ittikās*, he is called *Kārttikeya*, or *Shān'mātura*, son of six mothers; he bears the names also of *Gāngeya*, son of Gangā; *S'arabhū*, reared in S'ara grass; *Shan'mukha*, the god with the six faces; etc. One of his common appellations is *Kumāra*, youthful.

KASAN': see KAZAN.

KASANLIK, *kāz-ān-līk'* or *-lēk'*, or KEZANLYK, *kēz-ān-līk'* or *-lēk'*: town of E. Roumelia, at the foot of the Balkans, abt. 5 m. s. of the famous Shipka Pass, 85 m. n.w. of Adrianople. It lies in a fertile and well-watered plain, and produces fine attar of roses. The Russo-Turkish war 1877-8, seriously injured the prosperity of the place. Pop. 10,000.

KASBIN', or KAZVIN': see CASBIN.

KASCHAU, *kā'show* (Hun. KASSA): town of Hungary, in the beautiful valley of the Hernad, surrounded by vine-clad mountains, 130 m. n.e. of Pesth. It contains 15 churches, of which that of St. Elizabeth (built 1342-82) is said to be by far the finest Gothic edifice in Hungary. Stoneware, leather, cloth, sugar, tobacco, and paper, are manufactured. Two battles were fought near K. during the Hungarian revolution, both of which the Austrians gained. Pop., inclusive of suburbs (1880) 26,097.

KASHAN, *kā-shān'*: one of the most flourishing towns of Persia; in a well-peopled, well-cultivated district, 3,690 ft. above sea-level, and 92 m. n. of Ispahan. The vicinity is celebrated for its fruit, and the town for extensive manufactures of silk-stuffs, gold brocade, carpets, and copper-ware. It abounds, like all Persian towns, in mosques, bazaars, baths, etc. Pop. 30,000.

KASHGAR': see CASHGAR.

KASHIN—KATAHDIN.

KASHIN, *ká'shìn*: town of Russia, 80 m. e. of Tver, on a tributary of the Volga. Tanning is a principal branch of trade. K. has many churches. Pop. (1881) 7,516.

KASHMIR': see CASHMERE.

KASKASKIA RIVER, *kàs-kàs'kì-a*: stream in Ill., rising in the e. part of the state, and falling into the Mississippi at Kaskaskia. It is navigable to Vandalia, abt. 80 m.; total length about 160 m.

The town of K. at the mouth of this river, on the Mississippi, was the first settled town in Ill., and the cap. till 1818. It was a French settlement. Pop. (1880) 326.

KASSALA: capital of the Nubian dist. of Taka, between the Red Sea, Abyssinia, and Sennaar. K. is on the Mareb, a tributary of the Atbara, and is 280 m. from Suakim. It is an important commercial and military centre. It was formerly Abyssinian, and has long been coveted by the kings of Abyssinia. Pop. estimated 8,000-20,000.

KASSIMOF, *ká-sē-mŭf*: town in the n.e. of the govt. of Riazan, European Russia, on the left bank of the Oka, from the 12th c. The chief branches of industry are tanning, rope-making, and chemicals. In the vicinity are several tombstones and other interesting relics of the time of the Mongolian rule. Pop. (1880) 14,102.

KASTAMUNI, *kàs-tá-mŏ'nē* (sometimes COSTAMBONE): town of Turkey in Asia, in the n. of Anatolia; cap. of the eyalet of K., abt. 250 m. e. of Constantinople. The glory of this city has to a great extent departed. It contains 30 mosques, and about as many public baths; but its industrial products comprise only cotton goods to a small extent, and some copper wares. Pop. 12,350.

KAT RIVER: branch of the Great Fish river, in the Cape Colony, rising in the Didimaberg, in the valleys of which, in 1828, were settled, under the care of the London Missionary Soc., a large body of Hottentots and Bastards, who occupied the country formerly inhabited by the Kafir chief Macomo and his people. But in the commencement of the war of 1850, the credulous Hottentot population believing that the Colonists were about to drive them from their farms, threw themselves into the arms of the Kafir chiefs, and expelling the missionaries, invaded the Colony. This led to the breaking up of the settlement as a mission station and exclusive native reserve; and it now forms the division of Stockenstroem, and is inhabited by a rather dense, mixed population of Hottentots, Fingoes, and Europeans. It is one of the best watered, wooded, and fertile districts in the Cape Colony, has about 400 sq. miles.

KATA, prefix, *kăt'a* [Gr.]: Greek proposition signifying down, downward, largely used in composition in English scientific terms derived from the Greek.

KATAHDIN, *ka-tá'dìn*, or **KATADN**, *ka-tá'dn*: mountain in Piscataquis co., Me.; 6 m. n.e. of the Penobscot river, 80 m. n. by w. of Bangor, 130 m. n.n.e. of Augusta; 5,385 ft. above the sea; highest mountain in the state. It is com-

KATER—KATRINE.

posed wholly of granite, has a few dwarf specimens of vegetation on its summit, is difficult of approach on account of the numerous falls in the river, and its summit affords a splendid view of wild scenery.

KATER, *kā'tér*, HENRY: physicist of remarkable experimental skill: 1777, Apr. 16—1835, Apr. 26; b. Bristol, England. At his father's desire, he began the study of the law, but relinquished his legal studies 1794, and obtained a commission in the 12th regt. of foot, stationed in India. During the following year, he was engaged in the trigonometric survey of India; and on his return 1808, became a student in the senior dept. at Sandhurst, and was shortly afterward promoted to a company in the 62d regiment.

His contributions to science are chiefly in *Philosophical Transactions*, to which, 1813-28, he contributed 15 papers. The most important of these memoirs are those relating to his determination of the length of the seconds' pendulum at the latitude of London; and those which describe his 'floating collimator,' an instrument for aiding the determination of the horizontal or zenith points, for which he received the gold medal of the Royal Astronomical Society. He was, jointly with Dr. Lardner, author of 'A Treatise on Mechanics' in *Cabinet Cyclopædia*. His memoirs on the verification and comparison of the standards of weights and measures of Great Britain and Ireland, induced the emperor of Russia to employ him to construct standards for the weights and measures of that country; and for these labors he received the order of St. Anne, and a diamond snuff-box. He died at London, from an affection of the lungs.

KATHAY', or CATHAY: see CHINA.

KATHETOMETER, n. *kāth'è-tōm'è-tér* [Gr. *kathētōs*, perpendicular height; *metron*, a measure]: an instrument for measuring small differences of perpendicular height.

KATKOFF, *kāt-kof'*, MICHAEL NIKIFOROVITCH: 1820-1887, Aug. 1; b. Moscow: journalist. He graduated at the Univ. of Moscow 1838, continued his studies in the universities of Königsberg and Berlin, was appointed prof. of philosophy at the Univ. of Moscow on his return; entered journalism as editor of the *Russkij Wiestnik* 1856, and established the famous *Moskovski Vedomosti* or *Moscow Gazette* 1861. He soon abandoned his liberal views, made his paper the organ of the old Russian party, advocated the most vigorous political measures, denounced the liberal educational system that he had helped to establish, and was instrumental in having it supplanted by one of military pedagogy. was appointed a privy councilor 1882, and had a remarkable influence over Alexander II. and his successor, as well as the aristocratic class of Russians.

KATMANDU: see KHATMANDU.

KATRINE, LOCH, *lōch kāt'rīn*: one of the most celebrated of Scottish lakes; near the s.w. border of Perthshire. It is eight m. in length, and three-quarters of a m. in mean

KÂTSENA—KÂTYÂYANA.

breadth; greatest depth, 78 fathoms; height above the sea, about 370 ft. Its shape is serpentine, and displays great variety of shore and background. Ben Venue and Ben An are on its banks. It contains several islets, one of which, Ellen's Isle, is the centre of the action of the *Lady of the Lake*. Several also of Wordsworth's lyrics are on subjects suggested in this locality. The waters of Loch K. are remarkably pure, having only one degree of hardness, and in all, two grains of solid matter to the gallon. The water-supply of the city of Glasgow (q.v.) is drawn from this lake and those connected with it (Vennachar and Achray). The water is conducted first by a tunnel 6,975 ft. long through a mountain, and then by aqueducts, pipes, and tunnels, to the reservoir near the city—more than 25 miles.

KÂTSENA, *kât-sē'na*, or **KASSINA**, or **KASHNA**: large, but now desolate town of central Africa, cap. of the province of K., subject to the sultan of Sôkoto. It is in a beautiful and salubrious district, lat. 12° 54' n., and long. 7° 25' e., 90 m. n.w. of Kano. It is surrounded by a wall about 14 m. in circuit, and contained at one time at least 100,000 inhabitants. In 1807, the conquering Fúlbe assailed it, and a seven years' war began. The capture of K. was achieved only through its destruction, and Kano (q.v.) has taken its place as the centre of commerce for the country. Present pop. of K. 7,000 to 9,000.

KATTIMUN'DOO, or **CUTTIMUN'DOO**: see **CUTTEA-MUNDU**.

KATTYWAR, or **CATTYWAR**, *kât-ē-wâr'*: term originally applied to one of the ten districts of the peninsula of Guzerat, but gradually extended, as a collective name, to the whole of them. In this larger sense, it stretches in n. lat. 20° 41' to 23° 8', and in e. long. 68° 56' to 72° 20'; 20,559 sq. m. This province of India, touching on part of its e. frontier the dist. of Ahmedabad, is everywhere else bounded by water—the Runn and Gulf of Cutch, the Arabian Sea, and the Gulf of Cambay. Politically, the country is divided among 188 chiefs, some paying tribute to the Guicowar of Guzerat, and the rest to the British govt., but all under the protection of the latter since 1820. These petty princes have a total revenue of £865,270 sterling, and a force of about 4,000 cavalry and 8,000 infantry. The climate is unhealthful; the surface is generally undulating. The principal crops are millet, maize, wheat, sugar, and cotton. Total pop. (1881) 2,343,899.

KATUNGA, *kâ-tŭng'gă*, or **EYEO**, *i'yô*: town of Gando, w. Africa, 25 m. from the mouth of a tributary of the Niger, about 200 m. n.e. of Abomey. It is surrounded by a mud wall and a ditch. There is brisk trade in yams, corn, goats, sheep, fowls, native cloth, etc. Pop. supposed about 15,000.

KÂTYÂYANA: name of great celebrity in the literary history of India. It belongs probably to several personages renowned for contributions to the grammatical and

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ritual literature of the Brahmanical Hindus; but it is also among the names of the chief disciples of the Buddha, S'âkyamuni.—The most celebrated personage of this name is K., critic of the great grammarian Pân'ini; and he is probably the same with the K. who wrote the grammatical treatise *Prâtisâkhyâ* of the white Yajurveda: see VEDA. Prof. Goldstücker, in *Pân'ini, etc., his Place in Sanskrit Literature* (London 1861), has shown that K. cannot have been a contemporary of Pân'ini, as was generally assumed; and in a paper read by him before the Royal Asiatic Soc. 1863, Feb., he proved that this K. lived at the same time as the great grammarian Patanjali, whose date he had previously fixed B.C. 140—120. See PATANJALI.

KATYDID, n. *kā'ti-did* (*Platyphyllum concavum*): species of grasshopper (q.v.) of pale-green color, native of N. America, very plentiful in parts of the United States, where its peculiar note is always heard during summer from evening twilight till midnight. This note is almost like a shrill articulation of the three syllables kat-y-did, following each other in quick succession, after which there is a pause of two or three minutes. The organ of sound is a transparent elastic membrane in a strong oval frame, in each of the wing-covers; these membranes, by the overlapping of the wing-covers, can be made to rub against one another, and the sound is produced by the friction.

KATZ AWA: Japanese statesman: b. province of Shidzuoka, Japan, about 1820. He entered the Japanese naval service at an early age, commanded one of the vessels that brought the Japanese embassy to the United States 1861, became asst. minister of the navy and member of the cabinet under the tycoon, was instrumental in saving Yesso from destruction during the rebellion, and advised the tycoon to resign 1868; was asst. minister of the navy under the reform govt., was appointed privy councilor and minister of the navy 1873, and became a member of the new parliament 1875. One of his sons was educated in the U. S. Naval Academy.

KATZBACH, *kätz'bach*: a small river in the Prussian province of Silesia, falling into the Oder at Parchwitz; famous from the battle on its banks 1813, Aug. 26, between the French troops under Marshal Macdonald, and the Prussians under Blücher, in which the latter were completely victorious. The French lost in the battle of the K. 5,000 killed, and 18,000 wounded and prisoners, with 103 cannons, two eagles, and 250 ammunition-wagons.

KAUAI: see SANDWICH ISLANDS.

KAUFFMAN, *kouf'mân*, ANGELICA (MARIA-ANNE-ANGELICA-CATHARINE KAUFFMANN): painter and royal academician: 1740 (or 41), Oct. 30—1807, Nov. 5; b. at Coire, in the Grisons. From 1754 till 69, she was much in Italy, and became mistress of the art of fresco-painting. But it was in London, whither she was induced to go by Lady Wentworth in 1765, that she became famous. She had great personal charms, knew several languages, and excelled as a musician. Sir Joshua Rey-

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nolds was her intimate and helpful friend: he often speaks of her as 'Miss Angel.' In 1773 she was appointed one of the decorators of St. Paul's. She returned to Rome 1782, married the Italian painter Zucchi, and lived through nearly a quarter of a century for her art in a circle of distinguished artists, poets, and scholars. Her paintings are numerous and well known, many being portraits and drawings from the antique. She is noteworthy for grace and color more than for correctness of drawing, or originality. Her figures have monotony of expression; and one critic declared that 'her men are masculine women.' Her best work was portraiture of the distinguished beauties of her time; especially in England her work in this line was greatly prized.

KAULBACH, *kowl'bach*, WILLIAM VON: 1805, Oct. 15—1874, Apr. 7; b. Arolsen, principality of Waldeck: German painter, conceded to be one of the leaders in modern art. In his 17th year he entered the Acad. of Arts at Düsseldorf, where he soon became one of Cornelius's best pupils. He seemed thoroughly penetrated by the severely ideal and allegorical spirit of that master, yet even from the first he showed no lack of individual genius. Among his first important productions (1828-9), were six symbolical figures, the best known of which is *Apollo among the Muses*. To the same period belongs a work of wholly different and even opposite character, *The Madhouse*, conceived and executed in the most vigorously realistic spirit. It added immensely to K.'s reputation, and King Ludwig of Bavaria employed him to decorate Duke Maximilian's palace in Munich. For this he executed, in the strictly antique style, 16 frescoes illustrating the fable of Psyche and Cupid. His designs from Klopstock, Goethe, and Wieland, for the same monarch, also are worthy of mention. In 1837, K. completed his *Battle of the Huns*, representing the grand legend of the continued struggle in mid-air of the souls of the Huns and Romans who had fallen before the walls of Rome, which was regarded as the culmination of the new German school. Nevertheless, the realism of which we have spoken still found expression in various works. His patient study of Hogarth is visible in his illustration of Schiller, of Goethe's *Faust*, and *Reineke Fuchs*. In 1846, K. completed what is probably his chef-d'œuvre, the *Destruction of Jerusalem by Titus*—a marvellous mixture of history and symbolism. In 1849, K. succeeded Cornelius as director of the Bavarian Acad. of Art. In 1859, he finished his *Battle of Salamis*. The *grisaille* cartoon (in oil) of Peter Artries is one of his latest and most characteristic works; among his paintings are *The Tower of Babel*, and a series of frescoes at Munich. Latterly he painted many portraits.

KAUNITZ, *kow'nits*, WENZEL ANTON, Prince VON, Count of Rietberg: Austrian statesman: 1711; Feb. 2—1794, June 27; b. Vienna. He studied at Vienna, Leipsic, and Leyden; travelled in England, France, and Italy; and being the head of an ancient and honorable family, soon

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received important political appointments from Emperor Charles VI. He continued to fill important situations under Maria Theresa. He gained great fame as a diplomatist 1748, at the congress of Aix-la-Chapelle. He was afterward Austrian ambassador at the French court; and 1753, was appointed court and state chancellor, and 1756 chancellor also for the Netherlands and Italy, and for almost 40 years had the principal direction of Austrian politics. The project of the partition of Poland originated with him. He had so much to do in the management of the political affairs of Europe, that he was jocularly called the European coach-driver. He was very vain and confident of his own abilities, so that his highest praise for anything which he thought well done was to say with an oath: 'I could not have done it better myself.' He was narrow in his political views, regarding exclusively the supposed interests of Austria, but sincere and upright according to his notion of his duty. He took a very active part in the ecclesiastical reforms of Joseph II., so that at Rome he was styled *the heretical minister*. He was a liberal patron of the arts and sciences. He retired from public life on account of old age, when Francis II. ascended the throne.

KAURI, or KOWRIE, or KAURI PINE, *kow'ri* (*Dammara australis*): species of Dammar (q.v.), native of New Zealand; a tree of great size and beauty, said sometimes to attain a height of 140 ft. or more, with whorls of branches, the lower of which die off as it becomes old. The timber is white, close-grained, durable, flexible, and very valuable for masts, yards, and planks. It is much used for masts for the British navy, no other being considered equal to them. The Fiji Islands, New Hebrides, and Australia produce other species, the timber of all of which is sold under the name of *K. Pine*, although there are differences of quality. All are trees of dark dense foliage, and produce a resin called K. RESIN, or K. GUM, and sometimes Australian Copal and Australian Dammar, of which large quantities are exported to Britain and N. America, chiefly from New Zealand. It is sometimes found in pieces as large as a child's head, of dull amber color, where forests of these trees have formerly grown, and is obtained by digging. It is also collected from the trees from which it has newly exuded, and is then of whitish color. It is used for making varnishes, etc.

KA'VA: see AVA.

KAVASS, n. *kă-väs'* [Turk. *kâvovâs*]: in *Turkey*, an armed constable or policeman.

KA'VERI. see CAUVERY.

KAVI, *kă'vê*: ancient sacred language of Java (q.v.).

KAW RIVER: see KANSAS RIVER.

KAYE, *kă*, Sir JOHN WILLIAM author of works on the history of India: 1814-1876, July 24; b. London. After serving in the Bengal artillery, he adopted literature as a profession, and was ultimately sec. of a dept. of the Indian office in London. His chief works are *The History of*

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the War in Afghanistan, the History of the Sepoy War in India, and the Life and Correspondence of Sir John Malcolm.

KAYLE, or **KAIL**, n. *kāl* [Ger. *kegel*, a cone, a nine-pin]: the game of nine-pins or nine-holes: see **KEEL** 2.

KAZAN' [Tarter, a *golden-bottomed kettle*]: a govt. of Russia, between Astrakhan on the e., and Nijni-Novgorod on the w; 24,500 sq. m., $\frac{3}{4}$ of which is cultivated. Pop., partly Moslem and Pagan (1880), 1,872,437.

KAZAN, *ká-zán'*: town of Russia, cap. of the govt., and ancient cap. of the kingdom of K., on the river Kazanka, four m. from the n. bank of the Volga, 200 m. e.s.e. of Nijni-Novgorod. It was founded 1257 by a Tarter tribe, and after various vicissitudes, was made cap. of an independent kingdom, by the Khan of the Golden Horde, which flourished in the 15th c. In 1552, the Russians, under Iwan the Terrible, carried the town after a terrible siege, and put an end to the kingdom. K. contains 30 churches, 9 convents, and 16 mosques; a university attended by 450 students, and with a library of 80,000 vols. There are 126 factories in K., the chief manufactures being soap and leather. Pop. (1880) 94,170.

KAZBEK, *káz'běk*, or **CASBECK**, *kás'běk*: second highest of the peaks of the Caucasus, 16,600 feet.

KEA (*Nestor notabilis*, or Mountain Nestor): New Zealand parrot which formally fed on fruits and seeds; now it not only eats offal at sheep stations, but sometimes kills and devours live sheep.

KEAN, *kēn*, **CHARLES JOHN**: 1811, Jan. 18—1868, Jan. 22; b. Waterford, Ireland; second son of Edmund K. He was educated at Eton. When his father fell into ill-health, he adopted the stage as a profession. He was popular in the provinces and in the United States before he achieved reputation in London. He married, 1842, Miss Ellen Tree, and till his death they acted together. He became lessee of the Princess's Theatre, London, 1850, and was director of the royal theatricals. His management at the Princess's Theatre was distinguished chiefly by the splendid manner in which certain plays were produced. The utmost pains was expended on scenery and dress, and as much care was taken to avoid anachronisms as to secure good acting. *Sardanapalus*, produced 1853, was perhaps the most striking of these 'restorations,' as they are called. K. attempted the parts in which his father shone, but did not succeed in being more than a comparative to the superlative which the elder generation of playgoers remembered. In a lower line of character, and in such pieces as the *Cor-sican Brothers*, *The Wife's Secret*, and *Louis XI.*, he was more at home than in the world of Shakespeare.

KEAN, **EDMUND**: tragedian: 1787, Nov. 4—1833, May 15; b. London. His father was a stage-carpenter; his mother, an actress. From infancy, the glare of the foot-lights was as familiar to him as the light of common day. While a child, he made his appearance on the boards, and

KEAN—KEANG-SI.

on one occasion gave a recitation before George III. at Windsor Castle. In 1803, he joined a strolling company in Scotland, and for 11 years performed in country theatres. He went to London 1814, in which year he appeared as Shylock in Drury Lane, his immense popularity filling the coffers of the managing committee, and enriching him. All London flocked to hear him; and Hazlitt, Hunt, and Lamb, who were constantly in the pit, declared that his acting was like 'teaching Shakespeare by a flash of lightning.' He twice visited America, made meteoric visits to the provinces, and ever in the heyday of his powers 'the pit rose at him,' to use his own expression. Unhappily, his habits were dissolute, and almost constant intoxication impaired his memory and his physical vigor. In the United States he was at first enthusiastically received, but soon lost favor on account of his personal habits, so that his genius never gained wide popular recognition here. In 1833, while his son Charles John was playing Iago to his Othello, the great actor broke down, and was led off the stage, never again to appear. He died at Richmond. His great characters were Othello, Shylock, Richard III., and Sir Giles Overreach. He is among actors what Byron is among poets, and Napoleon among generals. See *Life* by F. W. Hawkins (1869).

KEAN, *kēn*, ELLEN (TREE): actress: 1805-1880, Aug. 20; b. London; wife of Charles John K. She appeared on the stage first in London as Olivia in *Twelfth Night* 1823, played successfully in Edinburgh and Bath in comedy and tragedy, opened an engagement at Drury Lane, London, as Violante in *The Wonder*; became attached to the Covent Garden, opening as Lady Townley in *The Provoked Husband* 1829; played in the United States and Canada 1836-39; married Charles John K. 1842, and retired from the stage on the death of her husband 1868. She was the original Mariana in Sheridan Knowles's *The Wife*, Myrrha in Lord Byron's *Sardanapalus*, and the Countess in Knowles's *Love*; but was best known as the Rosalind and Viola of Shakespeare.

KEANE, *kēn*, JOHN JOSEPH, D.D.: ecclesiastic and educator: b. Killbarn, Donegal, Ireland, 1839, Sep. 12. He accompanied his parents to St. John, N. B., 1848; removed to Baltimore 1850, received a secular education in Calvert Hall, was engaged in mercantile business several years, studied for the Rom. Cath. priesthood in St. Charles's College and St. Mary's Seminary, and was ordained 1866, July 2. He was consecrated bp. of the diocese of Richmond and vicar-apostolic of N. C. 1878, Aug. 25, and appointed first rector of the Cath. Univ. of America in Washington, D. C., 1888. The university was dedicated 1889, Nov. 13.

KEANG-SI, *kā-āng'se'*: inland province of China, immediately n.w. of the maritime province of Fo-kien. See CHINESE EMPIRE.

KEANG-SU—KEARNY.

KEANG-SU, *kā-āng'sō'*: important maritime province of China, the wealthiest and most densely peopled district of the empire. See CHINESE EMPIRE.

KEARNY, *kār'nǐ*, LAWRENCE: 1789, Nov. 30—1868, Nov. 29; b. Perth Amboy, N. J.: naval officer. He was appointed midshipman in the U. S. navy 1807; promoted lieut. 1813; served effectively off the coast of the s. states during the war 1812–15; dispersed the W. Indian and Gulf coast pirates, captured their vessels, and destroyed their rendezvous 1826; performed the same service against the Greek pirates in the Levant 1827; promoted captain 1832; appointed commander of the E. Indian squadron 1841; took part in suppressing opium smuggling, and secured from the Chinese govt. a pledge of commercial facilities for Americans similar to those about being guaranteed to the English, which led to the treaty of 1845 between the United States and China; protested at Honolulu against the proposed transfer of the Hawaiian Islands to Great Britain 1843; and after holding several offices on home stations was retired with the rank of commodore 1867.

KEARNY, PHILIP: soldier: 1815, June 2—1862, Sep. 1; b. New York; nephew of Gen. Stephen Watts K. He graduated at Columbia College 1833; began studying law; accepted a lieut.'s commission in the 1st U. S. dragoons, of which his uncle was col., 1837; was sent to Europe by the war dept. to examine and report on the French cav. service 1839, entered the cav. school at Saumur, served as a volunteer with the 1st chasseurs d'Afrique in Algiers, and won the cross of the Legion of Honor by his daring exploits; and returned to the United States 1840. He was aide-de-camp on the staff of Gen. Alexander Macomb, commanding the army, 1840–1, and of Gen. Winfield Scott 1841–44, accompanied his uncle on the celebrated march to the S. Pass 1845; was promoted capt. of dragoons and equipped his co. with uniforms and horses from his private means 1846; served through the Mexican war on the staff of Gen. Scott; lost his left arm in the first assault on Mexico city, was the first man to enter the city at its subsequent occupation, and was brevetted maj. for his gallant services. After the war he commanded an expedition against the Indians on Rogue river, Or., resigned his commission 1851, and made a voyage round the world. In 1859 he returned to France to take part in the war in Italy, rejoined the chasseurs d'Afrique, was volunteer aide on the staff of Gen. Maurier at Magenta and Solferino, and was again decorated with the cross of the Legion of Honor. On learning of the outbreak of the war of secession he hastened home; volunteered his services to the govt., and after a humiliating delay was appointed brig. gen. 1861, May 17, and given command of the 1st N. J. brigade. He served in the early Peninsula and Rapidan campaigns, was promoted maj. gen. 1862, July 7, repulsed Gen. Thomas J. Jackson's corps at the second Bull Run, and was killed inside the Confederate lines at Chantilly, while reconnoitering after placing his div. for the next day's fight. It is said that at the time of his death

KEARNY—KEAYNE.

his commission as commander of the Army of the Potomac was on Pres. Lincoln's desk awaiting his signature.

KEARNY, STEPHEN WATTS: soldier: 1794, Aug. 50—1848, Oct. 31; b. Newark, N. J.; second cousin of Lawrence K. At the outbreak of the war of 1812-15 he left his studies at Columbia College, and entered the army as 1st lieut., 13th U. S. inf.; was promoted capt. 1813, lieut.col., 1st U. S. dragoons 1833, brig.gen. 1846, June, and maj.gen. 1846, Dec., and appointed gov. of Cal. 1846-7, milit. and civil gov. of Vera Cruz 1847, Mar., and of Mexico city 1848, May. At the beginning of the Mexican war he took possession of N. M., established a provisional civil govt. in Santa Fé, and was twice wounded in engagements in Cal., which territory he had been ordered to occupy: see **FREMONT, JOHN C.**; **STOCKTON, ROBERT FIELD.**

KEARSARGE, kēr'sārj: mountain in Carroll co., N. H., immediately n.e. of N. Conway; lat. 44° 6' 20" n., long. 71° 5' 40" w.: height 3,250 ft.: from it the U. S. steamer *Kearsarge*, which sank the Confederate cruiser *Alabama* 1864, June 19, was named.—Also, mountain in Merrimac co., about 22 m. n.w. of Concord, height 2,950 ft., variously known as K., Kyar-Sarga, Pequawket, and Cowissewaschook.

KEATS, kēts, JOHN: English poet: 1795, Oct. 29—1821, Feb. 23; b. London. He was educated at Enfield, and was afterward apprenticed to a surgeon. Certain of his sonnets were published in the *Examiner*, then edited by Leigh Hunt, and received his cordial admiration. He published 1817 his first volume of poems; and in the following year *Endymion* appeared, dedicated to the memory of Thomas Chatterton. This poem was severely handled in the *Quarterly Review* and in *Blackwood*. He published a third volume of poems, containing *Lamia*, *Isabella*, *Eve of St. Agnes*, the fragment of *Hyperion*, and the odes to the *Nightingale* and the *Grecian Urn*. His health was at this time delicate; and shortly after the publication of his book he went to Italy, and died at Rome. His grave is close to Shelley's. There is an admirable memoir of K. by Monckton Milnes (Lord Houghton), also an edition of his poems (1877). In 1883, appeared a complete ed. of K.'s works, poems, and prose, 4 vols., edited by Buxton Forman.

K.'s early poems are disfigured by conceits and affectations and drew savage criticism; but his latest place him among the masters of his art. A few of them are actually unrivalled in literature for pure beauty and faultless melody. The *Eve of St. Agnes* is as melodious as any portion of the *Faery Queen*; *Hyperion* has something of the organ-tone of Milton. His influence is strikingly apparent in the subsequent efforts of the English muse—Browning has his color without his melody, Tennyson has his color and his melody both.

KEAYNE, ROBERT: 1595-1656, Mar. 23; b. England: philanthropist. He became wealthy as a merchant tailor, was a member of the honorable artillery company of London, promoted financially the Plymouth colony 1624, was

KEB—KEBLE.

a founder of the Mass. colony and settled in Boston 1635. He organized the ancient and honorable artillery company of Boston, contributed liberally to the support of Harvard College, founded the Latin Grammar School, and was a member of the legislature several times 1638-49.

KEB: see KED.

KEBBERS, n. plu. *kēb'bērz* [Dut. *kippen*, to pick out, to cull]: in *prov.* and *OE.*, inferior or refuse sheep taken out of the flock.

KEBBUCK, or KEBBOCK, n. *kēb'būk* [Gael. *cabag*, a cheese]: in *Scot.*, a cheese.

KEBLAH, n. *kēb'lā* [Ar. *kiblah*, anything opposite]: term designating the point of adoration; the point toward which a Mohammedan turns his face in prayer, being the direction of the temple at Mecca.

KEBLE, *kēb'l*, JOHN: clergyman of the Church of England: devout poet: 1792, Apr. 25—1866, Mar. 29; b. Fairford, Gloucestershire; son of the Rev. John K. of Coln St. Alwynds, Gloucestershire, and Sarah Maule, a lady of Scotch descent. The elder K., a divine of the school of Ken, educated his son at home, and with such success, that at the early age of 15, he was elected scholar of Corpus Christi, Oxford, then a small college composed wholly of members on the foundation, but numbering among its scholars such names as Sir J. T. Coleridge and Arnold of Rugby. In 1811 K. was elected to a fellowship at Oriel, one of the highest honors in the univ. In 1812, he gained both the Latin and English prize essays; was ordained deacon 1815, priest 1816. Neither the prospect of emolument at Oxford, nor the intellectual attractions of the Oriel common-room of which Whately and Copleston were then members, and to which Arnold, Pusey, and Newman were soon afterward added, could charm him from his first love, the life of an English parish priest. For a while he remained at Oxford as tutor and examiner, but soon took active clerical duty, principally assisting his father. In 1827 June, in deference to the wishes of his friends, he published *The Christian Year, or Thoughts in Verse for the Sundays and Holydays throughout the Year*, portions of which had been written as early as 1819. The success of the small volume, and its influence on religious thought in England, can hardly be over-rated. The number of editions sold (some of 3,000 copies) is marvellous. Although of unequal merit, many of the pieces being evidently written to complete the original plan, it is a work of genuine inspiration, combining with rare depth and fulness of religious feeling, the tenderest sensibility, and a poet's appreciation of nature in her more sympathetic and human aspects. In 1831, K. succeeded Milman as prof. of poetry. His official prelections are ingenious in theory, and composed in elegant Latin prose. But the time had come when he must quit the pleasant paths of poesy for the tumult of theological controversy. It was a period of peril for the English Church. Within, was apathy and want of of spiritual life, save only in the extreme Evangelicals, from whose defects

KECKSY—KEDGE.

of learning and taste Oxford naturally revolted. Without, a reformed parliament had already suppressed three Irish bishoprics, and seemed not unwilling to lay hands on the church at home. In his sermon on National Apostasy (1833), K. gave the signal for the Tractarian movement—a movement remarkable for the learning and ascetic saintliness of its promoters, and whose principles were deep submission to authority, implicit reverence for Catholic tradition, with firm belief in the divine prerogatives of the priesthood, the real nature of the sacraments, and the danger of independent speculation. In 1835, the poet married Miss Charlotte Clark, daughter of an old friend of his father, and quitted Fairford for Hursley, a living in the gift of Sir W. Heathcote, M.P. When Newman seceded to Rome, K., less logical perhaps, but with a truer instinct of fidelity to the Anglican Church, remained firm, and amid the general dismay, exerted himself to the utmost to confirm those who wavered. From this period till his death, his influence, though comparatively unseen, was great. His *Lyra Innocentium*, 1846, never equalled *The Christian Year*. K. died at Bournemouth. He was author of *Life of Bishop Wilson*; an edition of Hooker; and several contributions to periodical literature. A permanent memorial of K. exists in KEBLE COLLEGE, Oxford, incorporated 1870, June: it provides an academical education, economical living, with Christian training in accordance with the principles of the Church of England. See *Memoir* of K. by Sir J. T. Coleridge, 1869.

KECKSY, n. *kěk'si*: see under KEX.

KECSKEMET, *kěch-kěm-ăt'*: town of Hungary, 54 m. s.e. of Pesth; station on the railway between that city and Temesvar. It is said to be the greatest market-town in the country, and with its extensive suburbs, its streets, straggling and low buildings, may be considered a type of the Magyar town. Agriculture and vine growing are carried on; but the inhabitants are employed chiefly in rearing cattle, sheep, horses, and swine. Five markets are held here annually; the cattle-market is the most important in Hungary. Pop. (1880) 44,887.

KED, n. *kěd*, or KID, n. *kíd*, or KEB, n. *kěb*: in *Scot.*, the tick or sheep-louse: see TICK 1.

KEDGE, n. *kěj*, or KEDGE-ANCHOR [*Scot. kedge*, to toss about: Icel. *kaggi*, a cask fastened as a float to an anchor to show where it is: prov. Sw. *keka*, to tug or drag at a thing that comes but slowly]: a small anchor used in large ships to keep the bow of the vessel clear of the bower, or principal anchor. Another use of the kedge is to move the ship from mooring to mooring in a harbor; for this purpose, it is conveyed to a distance in a boat, then dropped, and the vessel hauled up toward it by a cable attached. KEDGE, v., to move a ship by means of a kedge, as in a river; in *OE.*, to stuff one's self in eating as full as a *keg*. KEDG'ING, imp. KEDGED, pp. *kějd*. KEDG'ER, n. *-ér*, a small anchor used in a river; a kedge. KEDGE-BELLY, or KEDGE, in *OE.*, a glutton, who stuffs himself as full as a keg or cask.

KEDJERI—KEEL.

KEDJERI, *kěj'ā-rē*: seaport of Bengal, on the w. side of the most w. channel of the Hoogly, formerly the principal approach to Calcutta from the sea. Between it and the metropolis there is a telegraphic line about 40 m. in length, the first work of the kind in India.

KEDLACK, n. *kěd' lak* [a corruption of OE. *kerlock*]: a troublesome wild plant in our fields: see **CHARLOCK**.

KEDRON, *kē'dron*, or **KIDRON**, *kīd'ron*: small stream, rising between one and two m. n.w. of Jerusalem, flowing through a gorge between Mount Olivet and Mount Moriah, and emptying into the Dead Sea.

KEECH, n. *kēch* [It. *caicchio*, a barrel]: in OE., a solid lump or mass.

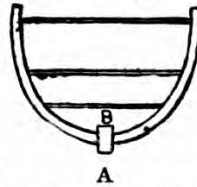
KEEK, v. *kēk* [Norw. *kika*; Dut. *kijken*, to peep: Lap. *kiket*, to shine]: in Scot. and OE., to peep; to look slyly and cautiously.

KEEL, n. *kēl* [F. *quille*, a skittle, nine-pins—from O.H.G. *chegil*, or *kegil*, a pin or peg: Ger. and Dut. *kegel*, a pin: Dan. *kegle*, a cone; *kegler*, nine-pins]: in OE., skittle; nine-pins. **KEEL-ALLEY**, a bowling-alley: see **KAYLE**.

KEEL, v. *kēl* [AS. *cēlan*, to cool; *cól*, cool]: in OE., to cool; to keep the pot from boiling over by stirring its contents. **KEEL'ING**, imp. **KEELED**, pp. *kēld*. *Note*.—In the line, 'while greasy Joan doth *keel* the pot,' *keel* is said by Wedgwood to mean 'to scour,' and not 'to cool,' as in the F. patois we have *quilland*, polished, shining; *acquiller*, to scour. In the same sense Mackay suggests Gael. *cuibhle*, a circular motion—descriptive of the act of scouring.

KEEL, n. *kēl*: see **KEIL**.

KEEL, n. *kēl* [Icel. *kiölr*; Dut. *kiel*; O.H.G. *kiol*, a keel: F. *quille*, keel of a ship—from Sp. *quilla*: Gael. *cul*, the bottom, the lower part]: the principal and lowest timber in a ship, extending from stem to stern, and supporting the whole frame; a low flat-bottomed vessel used on the Tyne; a ship or boat; in *bot.*, a projecting ridge, rising along the middle of a flat or curved surface; the two lowermost, and more or less combined, petals of a papilionaceous corolla: V. to navigate; to turn keel upwards. **KEEL'ING**, imp. **KEELED**, pp. *kēld*: **ADJ.** furnished with a keel. **KEEL'AGE**, n. *-āj*, port-dues; dues payable by ships for using a harbor. **KEELSON**, n. *kēl'sūn* [Dan. *kiol-svin*]: the piece of timber lying upon the keel into which the mast is stepped. It passes inside the vessel (B in fig.), from stem to stern, as the keel (A) does outside. The floor-timbers are passed below it, each being bolted through the keel, and alternate ones through the keelson. Like the keel, the keelson is composed of several massive timbers scarfed longitudinally together. **FALSE-KEEL**, a strong piece of timber bolted to the bottom of the real keel. **KEEL-HAULING**, punishment formerly in use, for sailors in the Dutch and in the British navy. The culprit was suspended from



KEEL—KEENE.

one yard-arm, and attached to him was a rope passing beneath the keel to the yard-arm on the opposite side of the ship: the punishment consisted in dropping the prisoner suddenly into the water, and hauling him beneath the keel up to the yard-arm on the other side.

KEEL: backbone, as it were, of a ship, running longitudinally along the middle of the bottom. It consists of massive timbers clinched together lengthwise. From it spring, on either side, the ribs on which the ship's sides are laid, and from it, at the bow and stern respectively rise the stem and the stern-post. As the decks bear by transverse beams upon the ribs, it follows that the whole weight of the ship and its contents exercise an oblique lateral pressure on each side of the keel. It is usually protected by strong iron binding, so that the keel may be as little injured as possible, in the event of the ship taking the ground. In iron vessels of modern construction, the keel is frequently dispensed with, corresponding strength being obtained by internal tie-beams, etc.; but the absence of the keel takes away one preventive to rolling from side to side. To be 'on an even keel' is to have the keel parallel to the surface of the water, i.e., the bow and the stern equally deep.

KEELING, *kēl'ing* (or Co'cos), ISLANDS: group in the Indian Ocean, lat. 12° 5' s., long. 90° 55' e.; about 600 m. s. of Sumatra, comprising Harsburgh, Direction, Prison, Rice, South, Long, West or Ross, and a number of smaller islands. The group furnished Darwin the typical example of an atoll or lagoon island. They have good water and abound in cocoa palms. William Keeling discovered them 1609. Alexander Hare settled on one of them 1823, the Dutch govt. claimed them from 1829, the English govt. assumed a protectorate 1856, and they were attached to the govt. of Ceylon 1878.

KEEN, a. *kēn* [Ger. *kühn*; Dut. *koen*, daring, bold; O.Sw. *kyn*, quick, daring; Icel. *kænn*, wise]: eager; sharp; fine-edged; piercing; bitter; acute. **KEEN'LY**, ad. *-lī*. **KEEN'NESS**, n. *-nēs*, acuteness of mind; eagerness; sharpness; rigor.—**SYN.** of 'keen': vehement; penetrating; cutting; acrimonious.

KEENE, *kēn*: city, cap. of Cheshire co., N. H.; on the Ashuelot river, at junction of the Cheshire and Ashuelot railroad; 42 m. n.w. of Fitchburg, 50 m. s.w. of Concord, 65 m. n. of Springfield, 92 m. n.w. of Boston. It occupies a wide plain surrounded by lofty hills, is handsomely laid out and ornamented, has a central square from which the principal avenues radiate, and is supplied with water from Silver Lake by an aqueduct 3 m. long. It has 8 churches, high and graded public schools, co. court-house, city-hall, public library, 4 national banks (cap. \$550,000), 3 savings banks, and several daily and weekly newspapers. The industries comprise locomotive and car-works, steam tanneries, woolen and flannel mills, iron-foundry, granite quarries, pottery, and furniture and carriage factories. **Pop.** (1870) 5,971; (1880) 6,784.

KEENE—KEEP.

KEENE, LAURA: 1830-1873, Nov. 4; b. Chelsea, England: actress. She made her appearance on the stage first at the Lyceum Theatre, London, 1845, and achieved remarkable success in light comedy. 1852, Oct. 20, she gave her first American performance in Wallack's Theatre, New York, and played in the principal n. and e. cities till 1854, when she went to Cal. and thence to Australia. Returning to the United States, she opened the Metropolitan Theatre, New York, 1855, and the Varieties—afterward the Olympic—1856, and first produced the celebrated comedy *Our American Cousin*, supported by Joseph Jefferson (q.v.) as Asa Trenchard and Edward A. Sothorn as Lord Dundreary, 1858, Oct. 18. She subsequently organized a stock company; and it was while witnessing its performance of *Our American Cousin* in Ford's Theatre, Washington, 1865, Apr. 14, that Pres. Lincoln was shot. She acted till within two years of her death.

KEEP, v. *kēp* [AS. *cēpan*, to take, to hold, to catch, to observe: Fris. *kijpen*, to look: comp. Gael. *ceap*, to catch, to intercept: Scot. *kep*, to receive, to catch]: to hold; to retain, as a thing in one's power or possession; to hold in charge; to protect; to support; to feed; to have in one's pay; to remain undecayed or untainted, as food; to have the care of; to solemnize, as a day; to detain; to observe; to conceal; to remain in any state; to be durable; to adhere strictly to: N. condition, as in good *keep*; in *medieval fortification*, the central and principal tower or building of a castle, the stronghold to which the garrison retired as a last resort when the outer ramparts had fallen (see **CASTLE**): a fine specimen of the ancient keep is extant amid the ruins of Rochester Castle. **KEEP'ING**, imp.: N. care; custody; just proportion or harmony; in *painting*, an attention to the proper subserviency of tone and color in every part of a picture. **KEPT**, pt. and pp. *kēpt*: ADJ. held; maintained; supported. **KEEP'ER**, n. *-ēr*, one who or that which keeps; a plain, flat, gold ring worn by married women next the wedding-ring as a guard or keeper to it. **KEEP'ERSHIP**, n. the office of a keeper. **KEEP'SAKE**, n. a gift to be kept for the sake of the giver. **TO KEEP BACK**, to withhold; to restrain. **TO KEEP COMPANY WITH**, to associate with. **TO KEEP DOWN**, to restrain; to hinder. **KEPT DOWN**, in *painting*, subdued in tone or tint. **TO KEEP FROM**, to abstain; to withhold from. **TO KEEP HOUSE**, to be detained at home, as by ill-health; to act as housekeeper. **TO KEEP ON**, to go forward. **TO KEEP TO**, to adhere strictly to. **TO KEEP IN**, to conceal; to restrain. **TO KEEP OFF**, to bear to a distance; not to admit. **TO KEEP ONE'S BED**, to remain in bed for a time from sickness. **TO KEEP UP**, to maintain; to continue; to remain unsubdued. **TO KEEP A DAY**, to observe it; to be intent upon it. **TO KEEP ONE'S WORD**, to observe it. **TO KEEP UNDER**, to oppress; to subdue; to keep within limits or easy control. **IN KEEPING WITH**, in harmony or correspondence with other parts or details. **KEEPER OF THE GREAT SEAL**, an officer of high dignity in the English Constitution, who is a lord in virtue of his office—whose duties are now generally

KEEPING THE PEACE—KEI.

merged in those of the lord chancellor, the speaker of the house of lords. *Note.*—KEEP, the AS. *cēpan* is a derivation from AS. *cēap*, traffic, barter, price, and is thus connected with *cheap* and *cheapen*—see *Skeat*.—SYN. of 'keep, v.': to reserve; guard; restrain; hold back; tend; care for; preserve; continue; practice; maintain; sustain; remain in; dwell; withhold; debar from; last; be durable; dwell; adhere to; support; in *OE*, to regard; attend;—of 'keeping': charge; preservation; guard; maintenance; support.

KEEPING THE PEACE: term in law including usually the avoidance of some specified offense. When a person has been assaulted, or is apprehensive of an assault, he may apply to justices to order the assaulting or threatening party with sureties to keep the peace. This is done by the justice ordering the party to enter into recognizances for his good behavior.—See also *LAWBURROWS*.

KEEVE, n. *kēv* [AS. *cyf*; Ger. *kufe*; Sw. *kyp*]: a large vessel for fermenting liquors; a mashing-tub: V. to set in a keeve for fermentation; to tilt a cart. KEEVING, imp. KEEVED, pp. *kēvd*.

KEEWATIN, *kē-wá'tin*, properly KEEWAYDIN: Indian name for the n.w. wind, but now adopted for the territory in British America n. and e. of Manitoba, and extending to Ontario. K. comprises 395,000 sq. m.; by the act of 1876, Oct. 7, this division of land was detached from the N. W. Territories, and erected into the 'District of Keewatin.' That portion bordering on Lake Superior exhibits some splendid scenery, cliffs rising hundreds of feet—in the case of Thunder Cape, to the height of 1,350—and in every variety of form. The country in the interior is rugged, but large portions are covered with fine timber. Rocky ledges, swamps, lakelets, patches of good arable land, larger areas of good or sandy soil, lakes and rivers teeming with fish, with many a fall, are its leading features. Very rich mines have been discovered and are being worked, and in their neighborhood villages have sprung up, particularly Silver Islet and Prince Arthur's Landing on Thunder Bay, and Fort William on the Kaministiquia river, which has been selected as the eastern terminus of the Canada Pacific railway. The portion w. of Lake Winnipeg is, however, low and fertile, and is being settled principally by immigrants from Iceland.

KEFF, or EL-KEFF: town of Tunis, about 95 m. s.w. from the capital. It is fortified. and ranks as third in importance among the Tunisian towns. Pop. abt. 12,000.

KEG, n. *kěg* [Icel. *kaggi*; Norw. *kaggje*, a small cask; Scot. *cog*, a hooped wooden vessel; Gael. *cogan*, a small drinking-dish]: a small cask or barrel; formerly and more properly written *cag*.

KEHUL, n. *kē'hul*: powdered antimony and rosin, used by the Arab women in darkening their eyelids and eyebrows.

KEI, *kā*, RIVER, GREAT: important stream formerly dividing British from Independent Kaffraria; now inside the

KEIGHLEY—KEITH.

British frontiers. The K. with its branches, all rising in the Stormbergen, drains a basin of about 7,000 sq. m. It is very rugged in its lower course, and its mouth, like all other Kaffrarian rivers, is hopelessly barred.

KEIGHLEY, *kēlh'li* (locally **KEITHLEY**): market and manufacturing town in the West Riding of Yorkshire, England, on river Aire, nine m. n.w. of Bradford, 222 m. n. of London by railway. It has a free grammar-school with a small endowment. A mechanics' institution was opened 1870. Many new buildings have lately been erected; and 1876 were opened new water-works which had cost £150,000. The manufactures of worsted, machines, and paper are important. The town is beautifully situated and is growing. Pop. (1871) 19,775; (1881) 25,245.

KEISKAMMA, *kis-kām'má*, RIVER: formerly the boundary between the Cape Colony and British Kaffraria (incorporated 1865). It is a purely Hottentot name, signifying 'clear water.' It rises in the Amatola, and with its branches, the Chumie and Gaga, waters a very fertile country, formerly the headquarters of the Amaxosa Kafirs, now densely settled with industrious German and English settlers.

KEIL, or **KEEL**, n. *kēl* [Gael. *cil*, keil: F. *chaille*, a rocky earth]: ruddle or red clay of a fine deep red, used for marking sheep, etc.; decomposed ironstone, forming a red chalk or ochre: V. to mark with ruddle. **KEEL'ING**, imp. **KEELED**, pp. *kēld*: see **REDDLE**.

KEITH, *kēth*, FAMILY OF: Scottish family of origin unknown, like many other historical families of that country. It appears in record first during the latter half of the 12th c., and undoubtedly took its name from the lands of Keith in E. Lothian, to which the office of the kings marischal was attached. The family enters history in the beginning of the 14th c. In 1305, Sir ROBERT OF K., hereditary marischal of Scotland, is found high in the confidence of King Edward I. of England, holding under him the office of joint justiciar of Scotland from the Forth to the Mounth, and sitting in the English council at Westminster as one of the representatives of Scotland. He kept his allegiance to England several years after Bruce was crowned king of the Scots, but joined that prince before Bannockburn, where he commanded the cavalry, and by a well-timed charge upon the English archers, contributed not a little to the fortune of the day. His services were rewarded by a large grant of land in Aberdeenshire; and the possessions of the family were still further increased, before the close of the century, by a marriage with one of the co-heiresses of Sir Alexander Fraser, chamberlain of Scotland, Bruce's brother-in-law. Through this alliance, the Keiths acquired great estates in Kincardineshire, and having added to them the remarkable sea-girt rock of Dunnottar, they built or restored a castle upon it, which was henceforth their chief seat.

Earls Marischal.—About 1458, the family was ennobled in the person of Sir WILLIAM K., who was created Earl Mari-

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schal and Lord Keith. His house reached its highest pitch of power in the person of his great-great-grandson, WILLIAM fourth earl, nicknamed, from the seclusion in which he lived at Donnottar, 'William who kept the Tower.' By marriage with his kinswoman, co-heiress of Iverugie, he nearly doubled the family domains, which now included lands in seven shires, Haddington, Linlithgow, Kincardine, Aberdeen, Banff, Elgin, and Caithness. He was reputed the wealthiest peer in Scotland, having a rental of 270,000 marks a year, and being able, it was boasted, to travel from the Tweed to the Pentland Firth, eating every meal and sleeping every night on his own lands.—These vast possessions passed to his grandson, GEORGE, fifth earl, who 1593, founded the Marischal College and Univ. of Aberdeen. Its walls were inscribed with the words: 'THAY HAIF SAID: QUHAT SAY THAY: LAT THAME SAY;' in allusion, it would seem, to the popular reproach which the earl had brought on himself by adding the lands of the ancient abbey of Deer (q.v.) to his already overgrown estates. The story ran, that his wife earnestly entreated him to forego the spoil. 'But fourteen score chalders of meal and bear was a sore temptation,' says Patrick Gordon of Cluny, and the earl was deaf to her entreaties. Hereupon, it is said, she dreamed a dream, which was thought to portend the downfall of the house of Keith. She saw the monks of Deer set themselves to work to hew down the crag of Dunnottar with their pen-knives, and while she was laughing them to scorn, 'behold! the whole crag, with all its strong and stately buildings was undermined and fallen in the sea.' This was written before 1660. Within little more than half a century, Dunnottar was in ruins, and its lord a landless exile.—At the age of 22, GEORGE, tenth and last Earl Marischal, took part with his younger brother James in the rising of 1715. He was attainted, and his estates (yielding £1,676 a year) were forfeited; but he himself escaped abroad, where he rose to distinction in the Prussian service. His communication to the British govt, of a political secret which he learned when Prussian ambassador at Madrid, procured his pardon 1759. A year or two afterward, he revisited Scotland, and bought back part of the family estates, but refused the proffered restoration of the family titles. He speedily returned to Prussia, and died there 1778 at the age of 86.—His brother James, who had risen in the Prussian service to the rank of field-marshal, fell at Hochkirch 1758: see KEITH, FRANCIS EDWARD JAMES (MARSHAL KEITH).

Lords Keith.—Neither George nor James having any issue, the direct male line of the house came to an end. Lady Mary, sister of George, by her marriage, 1711, with John, sixth Earl of Wigton, had a daughter, Lady Clementina, who married Charles, tenth Lord Elphinstone, by whom, besides other children, she had Sir George Keith Elphinstone, who, 1797, was created Lord Keith of Stonehaven Marischal in the Irish peerage, and 1803, Lord Keith of Banheath in the peerage of the United Kingdom.

Earls of Kintore.—Sir John Keith, third son of the sixth

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Earl Marischal, was, for his services in saving the Scottish Regalia during the Commonwealth, raised to the peerage by the titles of Earl of Kintore, and Lord Keith of Inverury and Keith-hall. On the death of his grandson, the fourth earl, 1761, the estates devolved on the last Earl Marischal; and on his death 1778, the estates and titles passed to Alexander, sixth Lord Falconer of Halkertoun, grandson of the eldest daughter of the second earl, in whose family they remain.

KEITH. FRANCIS EDWARD JAMES, best known as MARSHAL KEITH: 1696, June 14—1758, Oct 14; b. at the castle of Inverugie, Aberdeenshire; second son of William, ninth Earl Marischal of Scotland, and Lady Mary Drummond, daughter of the Earl of Perth. He and his elder brother, George, Earl Marischal, had for their preceptor their kinsman, Robert K., afterward a bishop in the Scottish Episc. Church, and author of two valuable historical works. The brothers took part, on the side of the House of Stewart, in the insurrection of 1715, and after its suppression, were attainted (see KEITH, FAMILY OF). Having effected his escape, K. remained in France several years, improving his knowledge of the military profession, and waiting for an opportunity of obtaining service. In 1719, with his brother and other Scottish noblemen, he sailed on the fleet fitted out by Cardinal Alberoni and the Spanish court for the invasion of Scotland. The Jacobites were defeated at Glenshiel by the royal army, under Gen. Wightman, and forced to retreat. The Spanish auxiliaries were ready to renew the battle, but the Highlanders dispersed, and K., after lurking among the mountains, crossed the country to Peterhead, and escaped to the continent. He continued in the Spanish service, but all his expectations of promotion were disappointed, in consequence of his firm attachment to the Prot. Episc. Church. Consequently he applied for admission to the Russian service, and received from Czar Peter II. a commission as major-general. He distinguished himself in the wars with the Turks and Swedes, but finding the Russian service in various respects disagreeable, he entered that of Prussia 1747. King Frederick knew his merits, and gave him the rank of field-marshal. From this time his name is associated with that of the king of Prussia, who relied as much on the military genius of K., as on the diplomatic ability of his brother the Earl Marischal. K.'s talents became still more conspicuous on the breaking out of the Seven Years' War. He shared the doubtful fortunes of the king before Prague, and was present at the great victory of Rossbach, and at the retreat from Olmütz. His last battle was not distant. The Austrians under Daun, and the Prussians under their king, met at Hochkirch 1758, Oct. 14, K. commanding the right wing. The Prussian army was beaten, and K., surrounded and overwhelmed by numbers while endeavoring to force his way at the bayonet-point, was shot through the heart. His body was recognized by Count Lacy, formerly his own scholar in the art of war, and was buried at Hochkirch. K. wrote a brief but interesting fragment of a memoir of

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his own life, commencing with 1714, ending 1734, printed 1843 by the Spalding Club. For his military career after entering the Prussian service, reference may be made to Carlyle's *History of Frederick the Great*.

KEITLOA, n. *kit-lō'a*: the two-horned black rhinoceros: see RHINOCEROS.

KELÆNANESIAN, n. *kěl-ē-na-nēz'ī-an* [Gr. *kelainos*, black; *nēsos*, an island]: the dark races of the Pacific Islands: Adj. of or belonging to the dark races of the Pacific Islands.

KELAT, or KHELAT, *kěl-āt'*: capital of Beloochistan; more than 7,000 feet above sea-level; lat. 28° 52' n., and long. 66° 33' e. It is on the summit of a hill, and is a place of great military importance. It was occupied by England during the Afghan war; and in 1877 a treaty was concluded with the Khan, by which a British agent, with military escort, becomes resident at the court of Kelat. Pop. abt. 14,000.

KELIS, n. *kěl'is* [Gr. *kēlis*, a stain; comp. *chēlē*, a claw or talon]: another name for *keloid*; a disease of the skin presenting a cicatrix-like appearance. KELOID, n. *kěl'oyd* [Gr. *eidos*, resemblance]: a disease, consisting of an indurated mass, putting forth processes at its edges resembling crab's claws.

KELL, n. *kěl*: OE. and prov. Eng. for CAUL, which see.

KELLERMANN, *kěl'ēr-man*, F. *kā-lēr-mōng'*, FRANÇOIS CHRISTOPHE, Duke of Valmy: 1735, May 29—1820, Sep. 12; b. near Rothenburg, Bavaria. He entered the French army, and had risen to the rank of a *maréchal-de-camp* before the Revolution. He warmly espoused its cause, and 1791 became gen. of the army in Alsace. In 1792, he received command of the army of the centre on the Moselle, repelled the Duke of Brunswick, and delivered France by the famous cannonade of Valmy. His splendid bravery inspired his troops to a decisive victory. Yet, on allegation of treason against the republic, he was imprisoned ten months, and liberated only at the fall of Robespierre. He afterward rendered important services in Italy, and on the erection of the Empire he was made a marshal and a duke. In the campaigns of 1809 and 12, he commanded the reserves on the Rhine. At the Restoration, he attached himself to the Bourbons. He was moderate and constitutional in his views.—His son, FRANÇOIS ÉTIENNE K., Duke of Valmy (1770–1835), was also a French gen.; a dashing officer, but noted mostly as a pliant seeker of favors from the successive governments in France.

KELLEY, *kěl'li*, WILLIAM DARRAGH: statesman: b. Philadelphia, 1814, April 12. He was apprenticed to the printer's and jeweller's trades in Boston, and while following the latter began studying law and contributing to the newspapers. He returned to Philadelphia 1840, was admitted to the bar 1841, was attor.gen. of Penn. 1845–6, judge of the Philadelphia court of common pleas 1846–56.

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He was a democrat and free-trader till 1848; and 1854 became a republican, protectionist, and abolitionist. In 1860 he was a delegate to the national republican convention, and was elected representative in congress from the 4th district of Penn. as a republican. He has since held his seat continuously by re-elections, and is (1889) the senior member of the house in continuous service. Judge K. has served on some of the most important committees of the house, and has received the popular sobriquet of 'Pig-Iron Kelley,' because of his constant efforts to promote the iron interests of his state. He has published *Addresses of the Colored Department of the House of Refuge* (Philadelphia 1850); *Reasons for Abandoning the Theory of Free Trade and adopting the Principle of Protection to American Industry* (1872); *Letters on Industrial and Financial Questions* (1872); *Letters from Europe* (1880); and *The New South* (1887).

KELLEY'S ISLAND: principal of a group in Lake Erie, constituting a tp. of Erie co., O.; 3 m. from the mainland, 12 m. from Sandusky; 6-80 ft. above the lake level; 3,000 acres. It was known first as Island No. 6, then as Cunningham's; was purchased by Datus and Irad Kelley 1833-4, made a tp. 1840, first utilized for viniculture 1842, and produced its first wine 1850. Since then it has attained wide repute for grape-growing and wine-making, the principal grape being the Catawba. The basis of the soil is Devonian limestone, which rises close to the surface and is used largely for a variety of building purposes. On the island are numerous mounds and remains of earth-works containing early Indian relics, and on its n. side is the celebrated rock pronounced by Schoolcraft to be the most extensive, well sculptured, and best preserved inscription of the antiquarian period ever found in America. The island has been almost wholly denuded of its original rich growth of red cedar and other valuable trees. Mail, steamboat, and telegraph communications are maintained with Sandusky, and about 400 vessels annually enter and clear there in the grape, wine, and limestone trade. The tp. contains a money-order post-office, 3 hotels, 4 churches, and a graded school. Pop. (1880) 890.

KELLOGG, kél'og. CLARA LOUISE: singer: b. Sumterville, S. C., 1842, July 12; daughter of George K., inventor and manufacturer. The family removed to New Haven 1843, and thence to New York 1856, where Miss K. pursued a musical education with Millet, Rivarde, Manzochi, and Albites, supplemented by a course of lessons in London with Ardití. She made her first appearance at the Acad. of Music, New York, 1861 as Gilda in *Rigoletto*, and was well received at all her performances that season. In 1864 she achieved her first great success, as Marguerita in Gounod's *Faust*, which had never before been given in the United States, and with it made her first tour of the principal American cities. This success led to a London engagement 1867, during which she sang at the Handel festival in the Crystal Palace. In 1868 she made a con-

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cert-tour of the United States, 1869-71 appeared in Italian opera in New York, 1872 sang at Drury Lane, London, with Christine Nilsson (q.v.), and at a private concert given by Queen Victoria; and on her return to the United States organized an English opera company. In 1876 she organized an Italian opera company, and at the close of her engagements with it retired from the operatic stage. Excepting a flattering engagement for Vienna and St. Petersburg 1880, she has since sung in concert only. Her repertory comprised 45 operas; and those in which she achieved her greatest successes in America and Europe are *Faust*, *Crispino*, *Aida*, *Traviata*, and *Carmen*.

KEL'LOGG, WILLIAM PITT: lawyer: b. Orwell, Vt., 1831, Dec. 8. In 1848 he removed to Ill.; 1854 was admitted to the bar; 1856 and 60 was delegate to the republican national conventions, and was republican presidential elector; 1861 was appointed chief-justice of Neb., and resigned shortly afterward to become col. of the 7th Ill. cav., and was promoted brig.gen.; 1865 appointed collector of New Orleans; 1868-71 was U. S. senator from La.; 1873 was declared elected gov., which led to an insurrection in New Orleans, federal military interference, a compromise, and his retention of the office; 1876 was unsuccessfully impeached; 1877-83 U. S. senator; and 1883-85 representative in congress

KELLOWAY-ROCK, n. *kěl'o-wā-rök* [from *Kelloway*, a place in Wiltshire]: a bed of arenaceous limestone belonging to the Middle Oolite.

KELLS, *kělz* (originally, *Kentis*): ancient corporate town of county Meath, Leinster, Ireland; on the Blackwater, 13 m. n. n.w. of Trim; associated, from an early period, with important events of Irish history. The town originated in a monastery founded in the middle of the 6th c. by St. Columba; in which monastery the Columban community of Iona found refuge when that island was devastated by the Norsemen 802-815. K. is renowned for an ancient manuscript copy of the gospels, called the Book of K., beautifully executed with colored ornamentation, and believed to date from the 6th or 7th c. It is preserved in Trinity College, Dublin. K. was a bishop's see. Pop. (1881) 2,822.

KELP, n. *kělp* [a probable corruption of *kali*]: sea-weed of various kinds. The term is applied also to the crude alkaline matter produced by the combustion of sea-weeds, of which the most valued for this purpose are, *Fucus vesiculosus*, *F. nodosus*, *F. serratus*, *Laminaria digitata*, *L. bulbosa*, *Himanthalia lorea*, and *Chorda filum*. These are dried in the sun, then burned in shallow excavations at a low heat. About 20 or 24 tons of sea-weed yield one ton of K., which, in commerce, consists of hard, dark-gray or bluish masses, which have an acrid, caustic taste, and are composed of chloride of sodium, of carbonate of soda (formed by the decomposition of the organic salts of soda), sulphates of soda and potash, chloride of potassium, iodide of potassium or sodium, insoluble salts, and coloring matter. It was formerly the great source of soda (the crude

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carbonate); but this salt is now obtained at lower price and of better quality from the decomposition of sea-salt. A ton of good K. will yield about eight lbs. of iodine (which is obtained solely from this source), large quantities of chloride of potassium, and additionally, 'by destructive distillation, a large quantity (four to ten gallons) of volatile oil, four to fifteen gallons of paraffine oil, three or four gallons of naphtha, and one and a half to four cwt. of sulphate of ammonia.'—Ansted's *Channel Islands*, p. 515. Except the iodine and chloride of potassium, none of these substances are obtained under the present treatment.

In Brittany, the total annual production of K. is as much as 24,000 tons, while in all the British Islands the total manufacture is only 10,000 tons. Prof. Ansted, in the work above quoted, shows that the manufacture of K. might be made a source of wealth to the Channel Isles. The Guernsey sea-weed is stated by Prof. Graham to be the richest known source of iodine, for which substance there is increasing demand for photographic purposes.—Before the remission of the duty on salt and on Spanish barilla, the K. manufacture was extensive and profitable on the British shores. Regular cultivation of the sea-weed was even practiced to some extent by placing within tide-mark on sandy shores large stones, which were soon covered with it.

KELPIE, n. *kěl'pī*: in *Scotch myth.*, a water-sprite; a water-witch of malignant nature.

KELSO, *kěl'sō*: town in Scotland, finely placed on the n. bank of the Tweed, opposite the point where that stream receives the Teviot. The name was anciently *Kalchu* or *Calchou*, and is supposed to have had its origin in a precipitous bank abounding in gypsum, still called the *Chalk-heugh*. The town had its importance, if not its existence, from a richly endowed abbey of Tironensian monks, planted at Selkirk 1113, by King David I. when Prince of Cumbria, and transplanted after his accession to the Scottish throne 1124 'to the church of the Blessed Virgin Mary, on the bank of the Tweed beside Roxburgh, in the place called Calkou.' The abbey was ruined by the English under the Earl of Hertford 1545, and all that remains of it is part of the Abbey Church. It is in the later Norman or Romanesque style, and had a nave of two bays, n. and s. transepts each of two bays, a central tower still 91 ft. high, and choir of unascertained length. The more modern parts of the town are well built. A handsome bridge, designed by Rennie, connects Kelso with its suburb of Maxwellheugh, and commands a noble view. On the n.w. of the town, in a beautiful park, is Floors Castle, seat of the Duke of Roxburgh; built 1718, from the design of Sir John Vanbrugh, and enlarged and improved by the present duke. On the opposite bank of the Tweed are the ruins of Roxburgh Castle, anciently the strongest fortress on the e. border. The town of Roxburgh, which rose under the shelter of its walls to be one of the four chief towns in Scotland, has so completely disappeared, that scarcely a

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trace remains. K. was made a burgh of barony 1634. It has no manufactures, and little trade, though two newspapers are published in it. Pop. (1881) 4,687.

KELT, n. *kělt*: in *Scot.*, a salmon that has been spawning; a foul fish.

KELT, n. *kělt*, KELTIC, n. *kěl'tik*: other spellings of CELT and CELTIC, which see.

KEMAON', or KEMAUN': see KUMAON.

KEMBLE, *kěm'bl*, ADELAIDE: singer: 1814–1879. Aug. 6; b. London, England; daughter of Charles K. and youngest sister of Frances Anne K. She was educated for the lyric stage, made her first appearance in London, sang at the York festival 1835, appeared at Venice in the opera *Norma* 1839, in the principal Italian cities 1840, and English 1841, achieving success in *Norma*, *Figaro*, *Somnambula*, and *Semiramide*. She married Edward Sartoris, of Italy, 1843, and retired to private life. She published *A Week in a French Country House* 1867. Her son Algernon Charles Sartoris married Gen. Grant's daughter 1874.

KEMBLE, *kěm'bl*, CHARLES: actor: 1775, Nov. 25—1854, Nov. 12; b. Brecknock, in S. Wales; youngest son of Roger K. He received his education, like his brother John Philip, at Douai; and, 1794, Apr., made his first appearance at Drury Lane in the character of Malcolm. In 1806, July, he married Miss Marie Thérèse De Camp (1774–1838), who had distinguished herself in high-comedy. K., on being appointed Examiner of Plays, relinquished the stage 1840, April 10.—He was notable for cultivated conception and for polished humor, in the higher comedy.

KEMBLE, FRANCES ANNE (MRS. FANNY KEMBLE): actress: b. London, England, 1809, Nov. 27; eldest daughter of Charles K. She received a seminary education, became an actress to relieve her father from financial embarrassment, made her appearance first at Covent Garden 1829, Oct. 15, as Juliet, and established a lasting popularity the first night. She rapidly increased her Shakespearean repertory till it included Portia, Constance, and Queen Catharine, and supplemented it with Bianca, Belvidere, Camiola, Lady Teazle, Julia in *The Hunchback*, and Juliana in *The Honeymoon*. In 1832 she accompanied her father to the United States, and for two years they appeared together in the large cities. She made her last appearance as an actress in the Park Theatre, New York, 1834, June; and a few days afterward married Pierce Butler in Philadelphia. She retired to private life, lived alternately in Philadelphia and on her husband's estate in Ga.; and in 1846, on account of domestic disagreements, chiefly over her condemnation of slavery, she left her husband's home, and spent a year in Europe. In 1848 husband and wife were divorced to mutual satisfaction, and the latter resumed her maiden name. From 1849 till 1868 she frequently appeared before the public in England and America as a Shakespearean reader. She lived many years in Lenox, Mass., in Philadelphia 1873–77, and afterward in

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England. She was author of *Francis the First*, drama (London 1832); *A Journal of a Residence in America*, 2 vols. (1835); *The Star of Seville*, drama (1837); *Poems* (1844); *A Year of Consolation*, 2 vols. (1847); *Plays*, translations (1863); *Journal of a Residence on a Georgia Plantation* (1863); *Records of a Girlhood*, 3 vols. (1878); *Records of Later Life*, 3 vols. (1882); and *Notes on Some of Shakespeare's Plays* (1882).

KEMBLE, JOHN MITCHELL: Anglo-Saxon scholar and historian: 1807-1857, Mar. 26; b. London; eldest son of Charles Kemble. He studied at Trinity College, Cambridge, where he took the degree B.A. 1830, and afterward M.A. While an undergraduate he spent some time at Göttingen, under Jacob Grimm, which perhaps determined him toward Anglo-Saxon studies. He produced an ed. (1833), of the poem of Beowulf (q.v.), to a second ed. of which he added a translation, with glossary and notes. He edited for the English Historical Soc. a valuable collection of charters of the Anglo-Saxon period, *Codex Diplomaticus Aevi Saxonici*, 2 vols. (1839-40). His most important work, which contains the chief results of his researches, is *The Saxons in England*, 2 vols. (1849). This work was to have had two more volumes, when he died suddenly. K. was for many years editor of the *British and Foreign Review*; he also held the office of Censor of Plays.

KEMBLE, JOHN PHILIP: tragedian: son of Roger K. (1721-1802, strolling actor); b. Prescott, Lancashire, England. He received his education at a school in Worcester, afterward at a Rom. Cath. seminary in Staffordshire, finally at the English college of Douai, in France. On his return to England, he adopted the stage as his profession, making his first appearance at Wolverhampton 1776, Jan. 8. He made his first appearance at Drury Lane, 1783, Sep. 30, in Hamlet—always a favorite character of his—and 1790, he succeeded to the management of that theatre. In 1803, he purchased a share in Covent Garden Theatre, of which he also became manager. On the destruction of the building by fire, K. raised a new theatre, which was opened 1809, the management of which he retained till the close of his theatrical career. 1817, June, he took leave of his patrons in London; and a few days thereafter a public dinner was given him, under the presidency of Lord Holland. Thomas Campbell made his retirement from the stage the subject of a spirited set of verses. He finally took up his residence in Lausanne, Switzerland, where he died.

K. was a great actor—one of the very greatest in his limited range, which was the grave, solemn, or heroic personation of the loftier characters of the drama—kings, prelates, heroes. His figure was commanding, his voice sonorous and well modulated, though he lacked physical capacity for the most vehement or pathetic expression. His style was minutely precise and elaborate, founded on thorough study. He was successful especially in Brutus, Cato, and Coriolanus; and the ancient playgoers, who re-

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membered his intonation and his Roman look, used to find the more modern stage comparatively unworthy of regard.—His sister, ELIZABETH (K.) WHITLOCK (1761–1836), was an actress who gained high favor in the United States, and performed before Gen. Washington at Philadelphia.—For his sister SARAH K., see SIDDONS, SARAH.

KEMPEN, *kěmp'én*: town in Prussian Poland, govt. of Posen, on the border of Silesia, 43 m. e.n.e. of Breslau. It has two churches, a beautiful synagogue and a hospital. More than half the people are Jews. Wax-refining, tanning, and brewing are carried on, and there is a trade in horses. Pop. (1880) 6,168.

KEMPEN: town of Rhenish Prussia, govt. of Düsseldorf, 20 m. n.w. of the town of Düsseldorf, near the Niers. There are manufactures of silk and woollen goods, wooden articles, stockings, and candles. It is said to be the birthplace of Thomas à Kempis (q.v.). Pop. (1880) 5,783.

KEMPER, *kěm'pér*, JAMES LAWSON: soldier: b. Madison co., Va., June 11, 1823. He graduated at Washington College 1842, studied law, served as capt. through the Mexican war, was member of the Va. legislature 10 years and speaker two, was appointed col. of the 7th Va. regt. in the Confederate army 1861, promoted brig.gen. 1862, maj.gen. 1864, was in most of the battles on the peninsula, and at Gettysburg was wounded and captured. He was elected gov. of Va. as a democrat 1873, and since the expiration of his term has been engaged in farming.

KEMPER, REUBEN; 1770–1826, Oct. 10; b. Fauquier co., Va.: soldier. He emigrated to O. 1800, became a land-surveyor in Miss., led a movement for the expulsion of the Spaniards from Fla. 1808, was kidnapped by Spanish authority and rescued by U. S. troops, was maj. and col. in the insurrectionary expedition against Mexico 1812, joined the U. S. army as a volunteer and rendered Gen. Jackson important service in the defense and battle of New Orleans, and after the war was engaged in cotton planting till his death.

KEMPIS, *kěm'pīs*, THOMAS À [from Kempen in Rhenish Prussia, his birthplace]; (family name, Hämerken, latinized, *Malleolus*, 'Little-hammer'): 1379 (or 80)—1471, Aug. 8. He was educated at Deventer, and in 1400 entered an Augustinian convent in the diocese of Utrecht, of which his brother John was prior. Here he took the vows 1406. He entered into priest's orders 1413, and was chosen sub-prior 1429, to which office he was re-elected 1448. His whole life appears to have been spent in the seclusion of this convent, where, amid all the political and ecclesiastical tumult of that time, he lived to extreme old age. The character of K., for sanctity and ascetic learning, stood very high among his contemporaries, but his historical reputation rests almost entirely on his writings—sermons, ascetical treatises, pious biographies, letters, and hymns. Of these, however, the only one which deserves special notice is the celebrated ascetical treatise *On the Imitation of Christ*, the authorship of which is popularly ascribed to

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him. This celebrated book, setting forth the exercises of a most devout, tender, yearning, and loving faith toward the Son of God, has had, next to the sacred Scripture itself, the largest number of readers of which sacred literature, ancient or modern, can furnish an example. In its pages, according to Dean Milman (*Latin Christianity*, VI. 482), 'is gathered and concentrated all that is elevating, passionate, profoundly pious in all the older mystics. No book, after the Holy Scripture, has been so often reprinted; none translated into so many languages, ancient and modern,' extending even to Greek and Hebrew, or so often retranslated. Sixty distinct versions are enumerated in French alone, and a single collection, formed at Cologne within the present century, comprised, though confessedly incomplete, 500 distinct editions. It is strange that the authorship of a book so popular, and of a date comparatively so recent, should still be the subject of one of the most curious controversies in literary history. The book, till the beginning of the 17th c., had been ascribed either to Thomas à K. or to the celebrated John Gerson (q.v.), chancellor of the Univ. of Paris, except in one ms., which, by a palpable anachronism, attributes it to St. Bernard; but in 1604, the Spanish Jesuit, Mauriquez, found a ms. in which it is attributed to John Gersen, or Gesen, Abbot of Vercelli, whom he regarded as clearly a distinct person from the Chancellor Gerson. From the time of this discovery, three competitors have divided the voices of the learned—not alone individuals, but public bodies, universities, religious orders, the Congregation of the Index, the parliament of Paris, and even the French Acad.; and the assertors of these respective claims have carried into the controversy much polemical acrimony. Walter Hilton, an English monk, also has been proposed as author; but the learned have now generally come to concede the honor to K. Indeed the question is between him and Gerson, as there is no evidence that the John Gersen (advocated by the Benedictines) ever lived. See Kettlewell's *Authorship of the De Imitatione* (1877). The theology of the *Imitation* is almost purely ascetical, and (excepting the 4th book, which regards the Eucharist, and is based on the doctrine of the real presence) the little book has been used indiscriminately, and has been found spiritually edifying by Christians of all denominations. See Kettlewell, *Thomas à K. and the Brothers of the Common Life* (1882).

KEMPTEN, *kěmp'tén* (anc. *Campodunum*): city of Bavaria, 65 m. s.w. of Munich. K. grew up around a monastery founded by the disciples of the great Irish missionary monk, St. Gall, about the end of the 7th c.; and eventually the abbot of K. became a prince abbot of the empire (1348). In 1804, the abbey, the city, and territory were secularized, and given to Bavaria. K. has manufactures of cotton, linen, paper, and matches. Pop. (1880) 13,872.

KEN, v. *kěn* [Icel. *kenna*; Norw. *kjenna*; Dut. *kennen*, to know, to perceive by sense: Scot. *ken*, to know; *kent*,

KEN—KENDRICK.

knew, known]: to see at a distance; to descry: N. view; reach of sight or knowledge. KEN'NING, imp. KENNED, pp. *kënd*.

KEN, *kěn*, THOMAS, D.D.: nonjuring Bishop of Bath and Wells, revered for saintly life, gentleness, and firmness. 1637–1711, Mar. 19; b. Little Berkhamstead, Herts. He studied at Oxford, held in succession several small country livings, and 1672 settled in Winchester, as prebendary and chaplain to the bishop. He was chaplain to Princess Mary, wife of William of Orange, for a year; and, 1680, became one of the chaplains of King Charles II. He was consecrated Bishop of Bath and Wells 1685. When James II. issued his *Declaration of Indulgence*, 1688, K. was one of the seven bishops who refused to read it, and were sent to the Tower in consequence; but, having sworn allegiance to James, K. found himself unable, in conscience, to take the oath to William of Orange. He was therefore deprived of his bishopric 1691, and subsequently lived in retirement with his friend, Lord Weymouth, at Longleat, in Somerset, where he died. Of his poetical works (4 vols. 1721) the best known are the morning and evening hymns, 'Awake, my Soul.' and 'All praise, my God.' The familiar doxology in long metre, 'Praise God, from whom all blessings flow,' was composed by him. Prose works were: a *Manual of Prayers* (1674), and his *Exposition on the Church Catechism* (1685). See *Life* by Anderdon (2d ed. 1854).

KENDAL, or KIRKBY KENDAL, *kér'bi kěn'dal*, or KIRKLY-IN-KENDAL: *kérk'li'ín kěn'dal*: municipal and parliamentary borough of Westmoreland, England; on the right bank of the Kent, 22 m. s.s.w. of Appleby. Here, in the reign of Edward III., a settlement of Flemings was formed, and the town became well known for its woollen cloths, called *Kendals*. Yarns, horse-cloths, knitted-work, linsey-woolseys, doeskins, and tweeds are staple manufactures. Near are several mills, also marble and paper works. There is a weekly market. Pop. (1871) 13,446; (1881) 13,696.

KENDAL-GREEN, n.: green cloth, originally made at Kendal for foresters.

KENDALL, *kěn'dal*, AMOS, LL.D.: 1789, Aug. 16—1869, Nov. 11; b. Dunstable, Mass.: journalist. He graduated at Dartmouth College 1811, was admitted to the bar, began practicing in Lexington, Ky., 1814, was private tutor in Henry Clay's family, removed to Georgetown, Ky., and was postmaster and editor of the *Argus* there, was appointed fourth auditor of the treas. dept. by Pres. Jackson 1829, was postmaster-gen. 1835–40, became manager of Prof. Morse's telegraph interests 1845, founded the Washington Deaf and Dumb Asylum and several scholarships in Columbian College, and was a liberal contributor to educational and Bapt. church enterprises.

KENDRICK, *kěn'drik*, ASAHEL CLARK, D.D., LL.D.: educator: b. Poultney, Vt., 1809, Dec. 7. He graduated at Hamilton College 1831, was prof. of Greek in Madison

KENDRICK—KENIA.

Univ. 1832-50, and since then has held a similar chair in Rochester Univ., beside teaching Hebrew and Greek in Rochester Theol. Seminary. He was a member of the American committee on the revision of the New Test. 1872-80, was ordained a Bapt. minister, but has never held a pastorate. He received the degree D.D. from Union College 1845, LL.D. from Lewisburg Univ. 1870. Beside magazine and review articles, his publications include: *A Child's Book in Greek*; *Introduction to the Greek Language* (1833); *Greek Ollendorff* 1851); *Echoes, or Leisure Hours with the German Poets* (1855); *Life and Letters of Mrs. Emily C. Judson* (1860); *Our Poetical Favorites*, 3 vols. of selections (1870, 75, 80); *The Anabasis of Xenophon, with Notes and Vocabulary* (1873); and *Meyer's Commentary on John*, revised with notes (1885).

KENDRICK, JOHN: about 1745-1800; b. Boston: navigator. He was bred to the sea, served as first lieut. on the Mass. war vessel *Rising Empire* 1776, and commanded a privateer during the remainder of the revolutionary war. In 1787 some Boston merchants fitted out an expedition consisting of the brig *Columbia* and the sloop *Washington* for the exploration of the n.w. coast of America and the islands of the Pacific, and gave K. command, with Robert Gray (q.v.) second. He reached Nootka Sound 1788, Sep., wintered there, made a voyage to China, returned and explored the Nootka region, traversed the strait of Juan de Fuca, and discovered a strait which he named Mass. Sound. In the meantime, having changed vessels with Capt. Gray, the latter discovered the river which he named Columbia from his brig. 1791, May 11, K. was awarded a medal by congress for his discoveries. Late in 1791 he made a voyage to Oceania and the s. seas, and opened a direct sandal-wood trade between Hawaii, China, and the United States.

KENIA, *kě-ně'a*, Mt.: great mountain mass in e. Africa, rather more than one degree s. of the equator, and not far n. of Kilimanjaro. It rises far above snow-level, and hence is known also as Doenyo Ebor, or White Mountain. Dr. Krapf, the first European to see its two snowy cones, estimated its height 18,000 feet.

KENILWORTH—KENNEBEC.

KENILWORTH, *kən'ul-wérth*: market-town of England, county of Warwick, $4\frac{1}{2}$ m. n. of the town of Warwick, and the fashionable town of Leamington. Tanning operations are extensive here; and combs are made. Pop. (1881) 4,150. The town has historical interest. The castle of K., united to the crown domains in the reign of Henry IV., was conferred by Elizabeth on Robert Dudley, Earl of Leicester, who here, 1575, entertained his sovereign 17 days, at a daily cost of £1,000. K. gave its name to one of the most splendid romances of Scott. It now belongs to the Earl of Clarendon. The extensive remains of the castle are well preserved, and much visited by tourists. There are ruins also of the ancient monastery.

KENITES, *kèn'its*: small nomadic tribe variously regarded as belonging to the Amalekite and Midianite families. They lived in Canaan in Abraham's time, about Sinai during a part of the wandering of the Israelites, near the encampment of the Israelites during the march to Palestine, and afterward in the n. part of Canaan, and in the extreme s. near Judah in Saul's time. Both Saul and David befriended them for the kindness of their ancestors to Israel in the wilderness, and David allowed them to live in the cities; but they did not wholly give up their nomadic habits. See Gen. xv. 19; Judg. i. 16; Num. x. 29, xxiv. 21, 22; Judg. iv. 11; I Sam. xv. 6, xxvii. 10, xxx. 29; Ex. iii. 1.

KENNAN, *kèn'an*, GEORGE: traveller: b. Norwalk, Huron co., O., 1845, Feb. 16. He received a public-school education, studied telegraphy, became asst. chief operator in the Cincinnati office 1864, and made his first long journey to Kamtchatka 1864-5. In 1865 he entered the service of the Russo-American Telegraph Company, and spent three years exploring, locating a route, and constructing a telegraph line between the Okhotsk Sea and Behring Strait in Siberia. In 1870-1 he made extensive explorations in Russia, and 1885-6 explored the Russian Altai and visited all the convict-prisons and mines in n. Russia and Siberia. On his return to the United States he published a series of illustrated articles on Siberia and the Russian exile system in the *Century* magazine (1888,9), which caused the suppression of that publication through Russia 1889. He also lectured on the convict system 1889-90. He has a keen eye as an explorer, a sure touch as a writer, and gives evidence of singular intrepidity and command of resources, and of entire trustworthiness.

KENNEBEC, *kèn-é-bék'*, RIVER: rising in Moosehead Lake, in the w. of Maine, and flowing southerly into the Atlantic Ocean, after receiving the Androscoggin, 18 m. from its mouth. On its banks are the important towns of Bath, Gardiner, Hallowell, and the state capital, Augusta. It is navigable by ships to Bath, 12 m.; by steam-boats to Hallowell, 40 m. In its course of 150 m., this river falls 1,000 ft., affording abundant water-power. At Augusta are falls, increased by a dam, 584 ft. long, supplying water to large factories, saw-mills, etc.

KENNEBUNK—KENNICOTT.

KENNEBUNK, *kĕn-ĕ-bŭngk'*: post village and tp. in York co., Me.; on the K. river and the Boston and Me. railroad; 3 m. from the Atlantic Ocean, 25 m. s. w. of Portland. The p. v. contains 4 churches, 2 high schools, 1 national bank (cap. \$100,000), 1 savings bank, 1 newspaper, and several ship-yards, has a coasting trade; and manufactures twine, boots and shoes, lumber, leather-board, leath-eroid, etc. The tp. contains also the villages of K. Depot and K. Landing. Pop. tp. (1870) 2,603; (1880) 2,852.

KENNEBUNKPORT, *kĕn-ĕ-bŭngk-pōrt'*: post village and tp. in York co., Me.; on the Atlantic Ocean at the mouth of the Kennebunk river; 4 m. s. e. of Kennebunk, 10 m. s. of Biddeford. The p. v. contains 4 churches, graded school; has a fine harbor and valuable ship-building and navigation interests; does its banking at Kennebunk and is a popular summer resort, having good hotels and board-ing-houses. It was formerly known as Cape Porpoise. in-corporated as Arundel 1717, name changed as at present 1821. Pop. (1880) 2,405.

KEN'NEDY, JOHN PENDLETON, LL.D.: 1795, Oct. 25—1870, Aug. 18; b. Baltimore: author. He graduated at the Univ. of Md. 1812; was admitted to the bar 1816; served in the legislature 1820–24; was member of congress 1835–42, presidential elector on the Harrison ticket 1840, and chair-man of the house committee of congress on commerce 1841–2; was re-elected member of the legislature and chosen speaker of the house of delegates 1846; was appointed sec. of the navy 1852, and aided in fitting out Com. Perry's Japan expedition and Dr. Kane's second Arctic voyage; was a strong Unionist during the civil war; and at its close spent several years in European travel. His numerous pub-lications include *The Swallow Barn* (1832); *Horseshoe Robin-son* (1835); *Rob of the Bowl* (1835); *Annals of Quodlibet* (1840); *Memoirs of the Life of William Wirt*, 2 vols. (1849, rev. ed. 1850); and many lectures, addresses, and essays. At his death he was provost of the Univ. of Md., vice-pres. of the Md. Hist. Soc., chairman of the board of trustees of the Peabody Acad. of Baltimore, and trustee of the Pea-body Educational Fund.

KENNEL, n. *kĕn'ĕl* [Norm. F. *kenil*; F. *chenil*—from mid. L. and It. *canilĕ*, a place where dogs are kept—from L. *cānis*, a dog: Gael. *coineal*, a place for dogs—from *coin*, dogs]: a house or cot for dogs; a pack of hounds; a haunt; a low or worthless habitation: V. to lodge or dwell as a dog or fox; to keep or confine in a kennel. **KEN'NELLING**, or **KENNELING**, imp. **KEN'NELLED**, or **KENNELED**, pp. *-ĕld*.

KENNEL, n. *kĕn'ĕl* [OF. *canel*; F. *chenal*, a gutter, a channel—from L. *canālis*, a channel, a water-conduit]: the water-course of a street; a puddle.

KENNICOTT, *kĕn'ni-kot*, BENJAMIN, D.D.: eminent Hebraist: 1718, Apr. 4—1783, Sep. 18; b. Totness, Devon-shire, England. He was educated at Oxford, where he

KENNING TO THE TERCE—KENRICK.

distinguished himself. He took his degree, M.A., 1750, having been previously elected a fellow of Exeter College; 1767 he was appointed Radcliffe librarian; and 1770, Canon of Christ Church, Oxford, where he died. The whole interest and importance of K.'s life are comprised in his great undertaking for the improvement of the Hebrew text of the Old Testament. In 1753, he published a work, *The State of the Printed Hebrew Text of the Old Testament Considered*. This contained, among other things, observations on 70 Hebrew mss., with an extract of mistakes and various readings; and strongly enforced the necessity for a much more extensive collation, to ascertain or approximate toward a correct Hebrew text. He undertook to execute the work in the course of 10 years, and labored, until his health broke down, from 10 to 14 hours a day. In spite of considerable opposition from Bishops Warburton, Horne, and other divines, K. succeeded in enlisting the sympathies and obtaining the support of the clergy generally. More than 600 Hebrew mss. and 16 mss. of the Samaritan Pentateuch were collated, with the assistance of English and continental scholars. The first vol. of his edition of the Hebrew Bible (*Vetus Testamentum Hebraicum, cum Variis Lectionibus*) appeared 1776, and the second 1780, accompanied by a very useful and instructive dissertation. The text chosen was that of Vander Hooght, and the various readings were printed at the bottom of the page. The *Variæ Lectiones Veteris Testamenti* (Parma 1784-88), published by De Rossi, is a valuable addition to K.'s Hebrew Bible. Jahn published at Vienna (1806) a very correct abridgment, embracing the most important of K.'s readings.

KEN'NING TO THE TERCE, in Scotch Law: process by which a widow (by law entitled to the rents of one-third of the deceased husband's lands, called her Terce) defines the particular portion of the lands to which her life-rent may attach. (See TERCE.)

KENOGENESIS, n. *kěn'ō-jěn'ě-sis* [Gr. *kenos*, void, empty; *genēsis*, origin]: vitiated evolution. KEN'OGEN-ET'IC, a. *-ět'ik*, pertaining to vitiated evolution.

KENOSHA, *ké-nō'sha*: city, cap. of K. co., Wis., on Lake Mich. and the K. and Milwaukee div. of the Chicago and Northwestern railroad; 30 m. s. of Milwaukee, 51 m. n. of Chicago. It is on a bluff overlooking a safe and commodious harbor; contains 10 churches, high school, 3 grammar schools, 2 Rom. Cath. parochial schools, female seminary, public library, reading-room, 2 water-cure establishments, 2 public parks, 1 national bank (cap. \$50,000), 1 savings bank (cap. \$50,000), and 2 newspapers; and manufactures carriages and wagons, also furniture. Pop. (1880) 5,039; (1885) 5,097.

KENRICK, *kěn'r'ik*, FRANCIS PATRICK, D.D.: 1797, Dec. 3—1863, July 8; b. Dublin: Rom. Cath. archbishop. He was educated in the College of the Propaganda at Rome, ordained a priest and appointed director of the Rom. Cath. Theol. Seminary at Bardstown, Ky. 1821, was theologian

KENSETT—KENSINGTON MUSEUM.

to Bp. Flaget at the Baltimore council, and appointed coadjutor bp. of Philadelphia 1830, founded the Theol. Seminary of St. Charles Borromeo in Philadelphia 1838, became abp. of Baltimore 1851, apostolic delegate to preside at the Baltimore council 1852, and primate of the Rom. Cath. Church in the United States 1859. He was an accomplished linguist, profound theologian, and able controversialist, and was author of numerous publications. —His brother, PETER RICHARD K., D.D., Rom. Cath. archbishop; b. Dublin, 1806, Aug. 17, came to the United States 1833, was appointed coadjutor bp. of St. Louis 1841, succeeded as bp. 1843, and became the first abp. of the archdiocese of St. Louis 1847.

KENSETT, *kěn'sět*, JOHN FREDERICK: 1816, Mar. 22—1872, Dec. 16; b. Cheshire, Conn.: artist. He studied engraving with Alfred Daggett, went to Europe 1840 and supported himself by engraving while studying painting; exhibited his first picture, *Windsor Castle*, in the Royal Acad. London, 1845; spent two years in Rome, and established himself in New York 1848. In 1849 he was elected a member of the National Acad. of Design, and 1859 appointed a member of the National Art Commission to superintend the decoration of the national capitol. His paintings were almost exclusively landscapes, and excepting his *Windsor Castle*, *View on the Arno*, and *The Shrine*, American in subject. After his death his brother presented 38 of his paintings to the Metropolitan Museum of New York.

KENSINGTON GARDENS, *kěn'sing-ton*: public ornamental park in London on the w. side of Hyde Park, from which it is partly separated by the Serpentine. It is traversed by walks and ornamented with rows and clumps of noble trees. Near the w. border of the park stands Kensington Palace, an edifice of brick, originally the seat of Heneage Finch, Earl of Nottingham and Lord Chancellor of England, and afterward bought by King William III. William III., Queen Mary, Queen Anne, and George II. all died in this palace, and here Queen Victoria was born. The gardens at first consisted of the grounds attached to the palace, and were only 26 acres in extent, but have been frequently enlarged, and now are two and a half m. in circuit.

KENSINGTON MUSEUM, South: at first a large building of iron and wood, on ground acquired for the Exhibition of 1851; opened 1857 as a collection of a scientific character from this exhibition; since superseded by the present permanent buildings. This popular and useful institution is intended for the promotion of art and science by means of systematic training of competent teachers, the founding of schools of art, public examinations, the giving of prizes, establishment of art libraries, etc. Besides the loan collection in the Picture Gallery, government has expended £1,000,000 in the acquirement of works of art. To the Museum belong also the Ceramic Gallery, collections of sculpture, the educational collection, naval models, materials for building and construction, a library, and an

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educational reading-room. There are large collections of reproductions by photography, casting, electrotype, etc., of important art objects. The original iron building was removed 1865, and re-erected as a branch Museum at Bethnal Green, for the exhibition of specimens of food and vegetable products for residents of the east end. The K. M. is open daily; and is free three days a week. Under the sanction of the Science and Art Department, a volume has been issued, entitled *South Kensington Museum*, containing 96 etchings, and many wood-engravings of examples of works of art in the Museum, and of the decoration of the building, with brief descriptions (1880). The enormous nat. hist. collection of the British Museum was 1880 removed to a very handsome terra-cotta building in South Kensington, erected for the purpose on the site of the Exhibition of 1862.

KENT, *kěnt*: maritime county of England, occupying a portion of the s.e. angle of the island; bounded n. by the estuary of the Thames, e. and s.e. by the Strait of Dover; area, 1,004,984 statute acres, or 1,570 sq. m.. Pop. (1881) 977,585. Besides the river which forms the n. boundary of the county, the chief streams are the Medway, which flows n.e. into the estuary of the Thames; the Stour, and the Darent. The surface is undulating, being traversed from w. to e. by the North Downs (see Downs). With a climate in general mild and genial, and a fertile soil of mixed chalk, gravel, and clay, K. is, in an agricultural sense, highly productive. Besides the usual crops, great quantities of seeds are raised for the London markets, as canary and radish seeds, spinach, cresses, and white mustard. There are also numerous market-gardens and orchards. Hops (q.v.) are among the chief products of the county. More than 40,000 acres, forming in all a hop-field more than four times as extensive as that of any other hop-growing county of England, are here devoted to the cultivation of this plant. Great numbers of sheep are fattened on the excellent pasturage found on the tracts of alluvial soil that skirt the Thames and Medway, and especially on the Romney Marsh, which comprises 44,000 acres. Since 1885, the county returns 19 members to parliament, including 11 for the boroughs. K. is unusually rich in historical association. For its early history, see HEPTARCHY. It has been the scene of many a battle, and the county is also bound up with the social history of the country through the three insurrections which broke out in it under Wat Tyler, Jack Cade, and Sir Thomas Wyatt. Of its numerous and interesting ecclesiastical edifices, it will suffice to specify here the cathedrals of Canterbury and Rochester. It contains the important dock-yards and arsenals of Woolwich, Chatham, and Sheerness; and the famous watering-places of Margate, Ramsgate, and Tunbridge Wells.

KENT, *kěnt*, EDWARD AUGUSTUS, Duke of: 1767, Nov. 2—1820, Jan. 23; b. England: fourth son of King George III. and father of Queen Victoria. He was educated at Göttingen and Geneva, entered the army 1790, served in the attack on the French W. India Islands, was appointed

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gov. of Nova Scotia and commander-in-chief of the British forces in N. America 1796, became gov. of Gibraltar 1802, and married the German princess Maria Louisa Victoria, daughter of the Duke of Saxe-Coburg, and widow of the Prince of Leiningen 1818, May 20, from which marriage Queen Victoria was born 1819, May 24.

KENT, JAMES, LL.D.: 1763, July 31—1847, Dec. 12; b. Philippi, Putnam co., N. Y.: lawyer. He graduated at Yale College 1781; was admitted to the bar 1785; settled in Poughkeepsie, was a member of the state assembly 1790–92; removed to New York and became a master in chancery and prof. of law in Columbia College 1793; was re-elected member of the assembly 1796; appointed recorder of New York 1797; judge of the supreme court 1798; chief justice 1804; and chancellor 1814. In 1823 he was retired on reaching the constitutional age-limit, and resumed his professorship. His publications include discussions on the constitutional history of the United States (1797); *Revised Statutes of the State of New York*, of which he was joint editor (1802); *Summary of the First Ten Lectures*, in Columbia College (1824); *Commentaries on American Law* 4 vols. (1826–30, 2d ed. 1832, 6th, 1847, 12th, 1884); *On the Charter of the City of New York and on the Powers of the Mayor, Aldermen, and other Municipal Officers* (1836, repub. 1856); beside numerous special papers and addresses. His written decisions in the supreme court are found in Caines's *Reports* (1813) and Johnson's *Reports of Cases in the Supreme Court and Court of Errors of New York from 1806 to 1823*, and his decisions in chancery in Johnson's *Reports of Cases in the Court of Chancery of New York from 1814 to 1823*.

KENT, WILLIAM: 1685–1748, Apr. 12; b. Yorkshire, England: landscape gardener. He was apprenticed to a coach painter, went to London to engage in portrait and historical painting, spent 1710–19 studying art in Rome, and from 1720 till his death was under the patronage of Lord Burlington in England. He worked as painter, sculptor, and architect, but is best known as the founder of landscape gardening in England and the designer of the Kensington Gardens.

KENT'IGERN, SAINT: see MUNGO, SAINT.

KENTISH, a. *kěnt'ish*: of or from Kent. KENTISH-FIRE, a species of cheering; colloquial name for the vehement and protracted cheers with which the rabble greeted the No-popery orators at the public meetings held in Kent to prevent the passing of the Rom. Cath. Relief Bill (1828–9). KENTISH-RAG, a provincial term for a member of the Lower Greensand, consisting of highly fossiliferous, gray, cherty, or arenaceous limestone; occurring at Hythe and other places on the coast of Kent, England; sometimes 60 or 80 ft. thick.

KENT ISLAND: belonging to Queen Anne co., Md.; largest island in Chesapeake Bay; 15 m. long. It is very fertile, has 4 churches and valuable oyster fisheries, is the site of the earliest settlement in Md., and was colonized by

KENTLEDGE—KENTON.

William Claiborne with several families from Va. 1631. Pop. (1870) 1,847; (1880) 2,137.

KENTLEDGE, n. *kěnt lěj* [Dut. *kant*, border, edge, and the termination *ledge*]: pigs of iron laid on the floor of a ship for ballast.

KENTON, *kěn'ton*: city, cap. of Hardin co., O., on the Sciota river and the Ind. Bloomington and Western railroad; 56 m. n. of Springfield. It contains 10 churches, union school, 2 national banks (cap. \$150,000), 1 state bank (cap. \$100,000), 2 newspapers, and manufactories of foundry products, machinery, sash, doors, staves, and lumber. It has large lumbering and farming interests. Pop. (1870) 2,610; (1880) 3,940.

KENTON, SIMON: 1755, Apr. 3—1836, Apr. 29; b. Fauquier co., Va.: pioneer. He removed to Ky. 1773, joined a party of hunters, became intimate with Daniel Boone, was a spy against the Indians for the British gov. of Va. 1774—8, was with Gen. Clark at the surprise of Kaskaskia, aided in expelling the British and Indians from Ky., commanded a company under Gen. Clark 1782 and a battalion under Gen. Wayne 1793—4, was appointed brig.-gen. of O. militia 1805, and was in the battle of the Thames 1813. He lost the immense tracts of land that he had taken up through not perfecting his title and the invasion of settlers, but the state subsequently confirmed them to him, and congress pensioned him.

KENT'S CAVERN.

KENT'S CAVERN, or KENT'S HOLE: celebrated bone-cave, in a small, wooded, limestone hill, at the junction of two valleys on the s. coast of Devon, England; about a mile e. from Torquay harbor, and half a mile from the n. shore of Torbay. It consists of two parallel series of chambers and galleries, having an approximately n. and s. direction. The aggregate length of the eastern series is more than 250 ft., and the western is probably longer. It has two narrow external openings or entrances, in the face of the same low natural cliff, on the e. side of the hill, and both opening into the e. suite of apartments. They are nearly on the same level, about 50 ft. apart, 70 ft. above the bottom of the valley immediately beneath, and 180 to 190 ft. above mean tide.

Nothing is known respecting the origin of its name; the earliest known mention of the cave is in 1778; but it did not attract the attention of scientific inquirers until 1824, Sep., when a Mr. Northmore visited it. In 1825, the Rev. J. M'Enery commenced researches, which extended at intervals over four years. The ms. account of his labors, long supposed lost, was published 1869, in *Transactions* of the Devonshire Association. In the cave-earth, beneath a thick floor of stalagmite, Mr. M'Enery discovered remains of more than 20 species of extinct and recent animals commingled. Among them were a few teeth of *Machairodus latidens*; a species not found elsewhere in Britain, and which many paleontologists hesitated to place in the cave fauna. Mixed with those remains, he found a number of human flint 'implements.'

Though the intermixture of human industrial remains with the bones of extinct mammals was confirmed by subsequent researches, even scientific men were unprepared for it, and it was either discredited or explained by various suppositions of a later mixture. In 1858, however, a virgin cavern was discovered at Brixham, on the opposite side of Torbay, and was systematically explored by a committee, under the auspices of the Royal and Geological Societies of London. The results obtained were confirmatory of the statements reported from Kent's Hole; and as a result of this, the British Assoc., 1864, appointed a committee to make complete exploration of so much of Kent's Cavern as still remained intact. The committee carried on their researches systematically until the end of 1879, when the whole floor of the cavern had been excavated to a depth of four ft., at an expense of £1,850. The work was suspended 1880.

In descending order, the deposits were: (1) Huge blocks of limestone, which from time to time had fallen from the roof; these were sometimes invested with sheets of stalagmite. (2) Black mold, 3 to 12 inches deep. (3) Stalagmitic floor, from a mere film to more than five ft. thick; but usually 16 to 20 inches: from its prevalent texture, it was termed *Granular Stalagmite*, to distinguish it from an older floor of the same material. It contained numerous fragments and blocks of limestone, and graduated downward into an extremely hard concrete or breccia. (4) A black band, of irregular outline,

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2 to 6 inches thick, composed mainly of bits of charcoal: this band was exceptional, being found in only one spot, 30 to 40 ft. from one of the cavern entrances, where it covered about 100 sq. ft. only. In about half this area, it was in immediate contact with the nether surface of the stalagmitic floor, from which, elsewhere, it was separated by a layer of red loam, which never exceeded 6 inches in thickness. (5) Red cave-earth, with angular fragments of limestone, from mere splinters to blocks almost as large as those on the surface. Small well-rounded fragments of rocks, not derivable from the cavern hill, occasionally present themselves. The depth of this deposit is generally unknown; it in most places exceeds 4 ft.—the depth to which the excavation is restricted at present—but in others it does not attain to this, and occasionally there is none. (6) Where the bottom of the cave-earth has been reached, a second floor of stalagmite occurs beneath it, generally of greater thickness than the granular floor, and in one instance, little short of 12 ft. On account of its structure, it is known as *Crystalline Stalagmite*. (7) Under this again is a mechanical deposit, of subangular and rounded pieces of red grit, not derivable from the cavern hill, embedded in a sandy paste of the same color, and denominated breccia.

The objects found in the black mold (2) form a large and miscellaneous collection, including objects extending from the present day back to mediæval and even pre-Roman times. The most important are stones of various kinds, well-rounded, and occasionally perforated by marine organisms; potsherds representing a large number of vessels; curvilinear plates of slate, probably covers for earthenware utensils; 'spindle whorls'; amber beads; an awl, a spoon, a wedge, and a chisel, all formed of bone; bone combs, which may be likened to small shoe-lifters having teeth in the broad end; a spear-head, a socketed celt, a spoon, a fibula, and rings, all of bronze; lumps of smelted copper; marine shells, such as still exist in Torbay; and bones and teeth of various animals, of existing species, including man.

The comparatively few objects found in the granular stalagmitic floor include pebbles of various kinds, flint implements, marine shells, pieces of charcoal, impressions of ferns, and remains of extinct and recent animals, including man, and the mammoth, cave rhinoceros, hyena, and bear.

The black band beneath the floor was extremely rich in objects, of which the principal were remains of the ordinary extinct and recent cave mammals; flint implements and chips; a bone awl; a bone fish-spear, or 'harpoon,' barbed on one side only; a bone needle or bodkin, with a well formed eye; and burnt bones. The flint specimens were keen-edged, brittle, and chalk-like in color and texture. They averaged about ten in every cubic ft. of material.

Throughout the entire depth of the deposit, the cave-earth contained bones of recent and extinct mammals and birds—chiefly recent; fecal matter, almost exclusively finely comminuted bone; coprolites, *ovate* and *lanceolate* flint implements, and flint chips; two bone 'harpoons'; a bone pin;

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small pieces of burned bone; 'whetstones,' and a stone hammer, or crusher. The bones are very abundant: most of them are of almost chalk-like whiteness, while a few are discolored; many are merely small splinters; a considerable number have been fractured, and gnawed precisely after the manner of modern hyenas; several are split longitudinally, as if to furnish laths of bone for tools; all are characterized by a specific gravity greater than that of those found above the stalagmite; on the tongue being applied to them, they all adhere to it; in no instance have the elements of an entire skeleton, or anything approaching to it, been found together; and remains of many different kinds of animals are often lying in contact. Certain branches of the cavern appear richer than others in bones; but wherever the cave-earth occurs, with its usual accompaniment of limestone fragments, they may be expected in average abundance, irrespective of depth below the stalagmite. The bone 'harpoons' and pin have the same chemical condition as the bones—they both adhere firmly to the tongue. The 'whetstones' are long narrow pieces of greenish grit, similar in form and material to those found in the Bruniquel caves in France. The 'stone hammer' is a small ellipsoidal pebble of coarse, hard, red sandstone. According to a Report furnished by Messrs. Boyd, Dawkins, and Sanford, 1869, the following species of mammals occur in the cave-earth: cave-lion, a *Felis* of the size of lynx, wild-cat, cave hyena, wolf, fox, *Canis vulpes* var. *spelæus*, *Canis* of the size of isatis, glutton, badger, cave-bear, grizzly bear, brown bear, mammoth, *Rhinoceros tichorhinus*, horse, urus or wild bull, bison, 'Irish elk,' red-deer, reindeer, hare, cave-pika, water-vole, field-vole, bank-vole, *Arvicola gulielmi*, and beaver; and in 1873 Mr. Pengelly added *Machairodus latidens*. More recent research (till 1879) has revealed additional specimens of animal remains, a repetition of those already discovered. In the chamber called the Cave of Inscriptions there are initials and dates graven on the stalagmite, 1609 being the oldest, and 1792 the most modern. But the most ancient inscription is that in the Bear's Den: 'William Petre, 1571,' which has been associated with a person of this name living at that period.

The animal remains in the crystalline stalagmite and the breccia beneath are exclusively those of bear. There is no trace of the hyena, the species most prevalent in the cave-earth; and these lower deposits belong apparently to an era earlier than the hyena's arrival in Britain. But here, too, are flint 'implements.' They resemble those of the cave-earth in being without a trace of polish, but are less symmetrical in form.

From the crushed character of the bones immediately beneath blocks of limestone, it may be inferred that the cave-earth, on which they lay, was firm, unyielding, and capable of offering a resistance to the huge blocks as they fell from the roof; hence it may be concluded that the flint-tools did not, as Mantell and others supposed, by sinking through the red earth, reach a depth greater than that which they primarily occupied.

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While it is possible that objects belonging to different eras may be commingled in the cave-earth, it is inferred that the most modern thing which it contains must be more ancient than the oldest article in the stalagmite formed on it; and as human tools have been found in the cave-earth, and bones of extinct mammals in the stalagmite, the contemporaneity of man with these extinct forms has with great positiveness been inferred.

It is no doubt true that a very large amount of labor has been expended on Kent's Cavern without the discovery of any portion of the human skeleton in the cave-earth. This is surprising in view of such positive facts as bone-tools and burned bones, and the flint implements. Moreover, the stalagmite floor, with its extinct mammals, has yielded a portion of man's osseous system—part of an upper jaw, containing four teeth. See MAN.

KENT'S HILL: post village in Readfield tp., Kennebec co., Me.; 14 m. n.w. of Augusta; on a hill commanding a fine view. It is the seat of the Me. Wesleyan Seminary and Female College (Meth. Episc.), chartered and opened 1821, with 570 students (1885-6), and under the presidency of Rev. Edgar M. Smith, A.M.

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KENTUCKY, *kěn-tŭk'ī*: a state; one of the United States of America; 2d in order of admission into the union, 1st in product of tobacco, 4th in malt and distilled liquors, 6th in hogs, 7th in corn, 8th in rye, coal, and mules; known as the 'Corn Cracker State.' The name is Indian, meaning 'Dark and Bloody Ground.'

Location and Area.—K. is in lat. $36^{\circ} 30'$ — $39^{\circ} 6'$ n., long. $52^{\circ} 2'$ — $89^{\circ} 40'$ w.; bounded n.e. by W. Va., n.n.e., n., n.w. by O., Ind., and Ill., s. by Tenn., s.e. by Va.; extreme length 400 m., extreme breadth 172 m.; 40,400 sq. m. (25,856,000 acres); mean elevation of mountain ridges 2,000 ft., river frontage 813 m.; navigable streams 4,000 m.; cap. Frankfort.

Topography.—In the w. are broad plains nearly level; in the s.e. are the Cumberland Mountains and numerous spurs covering about 4,000 sq. m.; and n. and w. of the mountain district is an undulating upland intersected by deep valleys, comprising more than half the area of the state, and bearing the name of the 'blue grass' region. It is based on blue limestone, and a portion of it is skirted by tracts known as barrens. In the extreme w. are bluffs and fertile river bottoms, which in the s.w. decline into cypress swamps with large shallow lakes. The surface has a general slope from the Appalachian range in the s.e. to the Ohio and Miss. rivers in the n. and w., the mountain district lying between the Cumberland range and Pine or Laurel Mountain, and showing an elevation of 2,000–3,000 ft. above sea-level on its parallel ranges, and of 3,500 ft. on the mountains between the ranges in the Cumberland Valley. The river boundary comprises the Chatterawha or Big Sandy on the e. (120 m.) the Ohio on the n. (643 m.) and the Mississippi on the w. (50 m.); nearly all the streams draining the state are tributaries of the Ohio river. The Big Sandy rises in Va. and W. Va. and forms the n.e. boundary between K. and W. Va.; the Licking rises in Floyd co., and after a winding flow of more than 200 m. empties into the Ohio opposite Cincinnati; the K., rising by several branches in the Cumberland Mountains, flows about 260 m., empties into the Ohio at Carrolton, and is navigable by steamboats 80 m. and small boats 100 m.; Green river rises in the upland region, flows 300 m., empties into the Ohio near the Evansville bend, and is navigable by steamboats 200 m. and by small boats nearly to its head-waters; the Cumberland rises in the valley between the Cumberland and Pine Mountains, has a long flow in Tenn.; re-enters K. near the Tenn. river, empties into the Ohio at Smithland, has a total flow of more than 600 m., and is navigable to Nashville, 200 m. from its mouth; and the Tennessee rises by two branches in Tenn. bisects the s.w. part of K. in a flow of 70 m., and empties into the Ohio at Paducah.

Climate.—The climate is mild and enjoyable; the mean annual temperature ranges 50° – 55° F. in different parts of the state; the annual rainfall ranges 45–50 inches; extreme ranges of the thermometer 4° below zero— 102° above; s.w. winds prevail in spring and summer, and n.w. in winter;

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rains are abundant in winter and spring, scanty in summer and autumn; snow does not remain long; and cattle remain on pasture during the entire winter with little if any additional food.

Geology.—K. is composed chiefly of Paleozoic strata, and the most important of its mineral resources are coal and iron. The e. coal measures cover an area of more than 10,000 sq. m. with elevation ranging from 650 ft. on the Ohio river to 1,400 ft. on the s.w. edge on the Tenn. border, and 3,500 ft. on the s.e. border; and the w. cover an area of 4,000 sq. m. with elevation ranging from 400 ft. along the Ohio river to 850 ft. in its s.e. part. The 'blue grass' region, Lower Silurian, has an area of 10,000 sq. m. with elevation 800–1,150 ft.; the Upper Silurian and Devonian, 2,500 sq. m., elevation 450–800–1,100 ft.; Sub-carboniferous, 10,000 sq. m., elevation 350–600–950 ft.; and the Quaternary, 2,500 sq. m., elevation 280–350–450 ft. The soils of the most fertile portion of the 'blue grass' region are derived from the 150 ft. immediately above the bird's-eye limestone. These rocks are very rich in phosphate of lime, and with proper care and prudent tillage the lands are not exhausted by cultivation. In central K. the blue limestones are very prolific in fossil forms. The Sub-carboniferous limestone region of w. and s. K. has an excellent soil, and is further noted for its numerous caverns of large size and weird beauty, the best known of which is the Mammoth Cave (q.v.). The Quaternary strata, w. of the Tennessee river, is highly calcareous, and its soils are very fertile, and with the exception of this region all the soils in the state are derived from the decomposition of rocks. Iron ores are found in Bath co., along the w. base of Pine Mountain, on the s.e. border of the state, in the Cumberland valley, and in the e. and w. coal measures; petroleum is obtained from the Devonian black shale in Barren co., lubricating oil in Wayne co.; salt-brine in the e. coal fields and in the w. limestone region; fire and pottery clays in both coal measures; and building stones in great variety in almost every part of the state. It is estimated that nearly two-thirds of the state is still covered by virgin forests of valuable timber, the largest tracts being in the coal measures. In e. K. there is an area of 10,000 sq. m. of white oak, ash, hickory, wild cherry, and other timber; in the valley of the Red river is an area of 40,000 acres where white pine predominates; and on the summits and slopes of the Cumberland and Pine Mountains, chestnut, oak, yellow pine, and hemlock are most numerous.

Zoology.—The rivers abound in fresh-water fish and mollusks, and the caves exhibit fossils of many extinct species, small game, including wild turkey, grouse, partridge, and quail, is plentiful, and several species of the American rabbit and squirrel are found. The buffalo and elk have disappeared, bears and wolves are now seldom seen, and the deer, raccoon, opossum, and badger—each in small number—are nearly all of the wild animals common to the Mississippi valley that survive.

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Agriculture.—In 1880 K. had 166,453 farms, 10,731,683 acres of improved land; farm lands, fences, and buildings valued at \$299,298,631; farm implements and machinery valued at \$9,734,634; and live stock on farms valued at \$49,670,567. The estimated value of all farm productions sold, consumed, or on hand was \$63,850,155. The live stock comprised 372,648 horses, 116,153, mules and asses, 36,166 working oxen, 301,882 milch cows, 505,746 other cattle, 1,000,269 sheep, and 2,225,225 swine. The principal productions were: hemp, 15,000 tons, barley 486,326 bushels, buckwheat 9,942, Indian corn 72,852,263, oats 4,580,738, rye 668,050, wheat 11,356,113, orchard products valued at \$1,377,670, hay 218,739 tons, cotton 1,367 bales, Irish potatoes 2,269,890 bushels, sweet potatoes 1,107,854, tobacco 171,020,784 lbs. (entire U. S. product 473,107,573 lbs.), wool 4,592,576, milk 2,513,209 gallons, butter 18,211,904 lbs., and cheese 58,468. The chief tobacco co. was Christian, product 12,577,574 lbs., followed by Henderson, 10,312,631, Daviess, 9,523,451, Graves, 8,901,434, Mason, 6,261,385, Bracken, 6,126,635, and Logan, 6,039,983.

Manufactures.—In 1880 K. had 5,328 manufacturing establishments, employing 37,391 hands, using a capital of \$45,813,039, paying in wages \$11,657,844, using materials valued at \$47,461,890, and yielding products valued at \$75,483,377. The chief industry according to capital employed was the manufacture of distilled liquors, which employed a capital of \$6,345,922, paid wages 560,121, materials \$5,453,575, and received \$8,281,018 for products. Next was iron and steel, which employed a capital of \$5,493,035, paid wages \$1,344,400, materials \$3,223,799, and received \$5,090,029 for products. Then followed flour and grist-mill products, capital \$3,685,759, wages \$336,419, materials \$8,406,432, products \$9,604,147; agricultural implements, capital \$2,296,037, wages \$364,385, materials \$823,392, products \$1,647,116; sawed lumber, capital \$2,290,558, wages \$671,939, materials \$2,410,743, products \$4,064,361; foundry and machine shop products, capital \$2,283,350, wages \$763,392, materials \$1,690,171, products \$3,013,079; slaughtering and meat-packing, capital \$2,229,500, wages \$150,576, materials \$3,644,059, products \$4,538,888; tanned leather, capital \$1,741,430, wages \$204,345, materials \$1,799,047, products \$2,511,960; printing and publishing, capital \$1,401,700, wages \$452,113, materials \$476,214, products \$1,289,316; malt liquors, capital \$1,260,944, wages \$209,143, materials \$897,922, products \$1,491,659; and tobacco, chewing, smoking, and snuff, capital \$1,069,800, wages \$344,219, materials \$2,232,080, products \$3,734,835.

Commerce.—K. has a large domestic trade in hemp, flax, tobacco, horses, whisky, mules, swine, cattle, and bagging. Louisville is the commercial emporium of the state; it and Paducah are the ports of entry. The state comprised 5 internal revenue districts (1889), with 5 collectors and 60 deputies, and the collections (1888-9) aggregated \$16,910,814. The 5th district ranked 3d in the country in amount, \$8,866,882, and the 6th district 9th, \$3,406,918.

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Transportation is facilitated by the excellent water routes and the rapidly extending railroad system of the state.

Railroads.—In 1880 there were 1,590 m. of railroad in operation, which cost \$69,261,896, and paid interest and dividends of \$2,480,604, out of net earnings of \$4,037,131. 1888, Jan. 1, the operative mileage was 2,341, which cost \$76,513,920, had an assessed value of \$35,571,631, and reported gross earnings of \$12,399,724 the previous year; and July 1 the mileage had been increased to 2,994.52, and further extensions were in progress.

Religion.—In 1880 K. had about 3,800 churches. The Bapt. led the denominations with 1,702 churches and 161,190 members. The Christians (Disciples) reported 595 churches, 79,525 members; Meth. (both branches), 425 ministers, 86,820 members; Cumberland Presb., 229 churches, 12,202 members, and the Rom. Cath. 149 churches. The latest available reports gave the Bapt. 64 associations, 1,021 ministers, 1,805 churches, 203,753 members, 717 Sunday-schools, 3,334 officers and teachers, 34,358 scholars, and church property valued at \$1,567,060; Meth. Epis. (Bowling Green, Lexington, and Louisville districts of the Lexington conference), 86 local preachers, 74 churches, 5,546 members, 74 Sunday-schools, 437 officers and teachers, 2,965 scholars, and church property valued at \$144,400; Meth. Episc. South, 107 effective ministers, 121 travelling preachers, 109 local preachers, 250 churches, 27,000 white members, 206 Sunday-schools, 1,665 officers and teachers, 12,131 scholars, and church property valued at \$617,010; Presb. (in the U. S. A.), 3 presbyteries, 59 ministers, 83 churches, 6,997 members, 70 Sunday-schools, 688 officers and teachers, and 4,308 scholars; Meth. Prot., 26 ministers, 27 local preachers, 1,078 members, 17 Sunday-schools, 59 officers and teachers, and 501 scholars; Prot. Episc. 44 clergy, 42 parishes and missions, 2,837 families, 5,714 members, 653 Sunday-school teachers, 4,710 scholars, 6 charitable and educational institutions, and 1 diocesan publication; Univ., 13 parishes, 13 churches, 265 families, 510 members, and church property valued at \$7,700; Congl., 8 ministers, 11 churches, 336 families, 377 members, and 1,094 Sunday-school scholars; Free-Will Bapt., 3 quarterly meetings, 29 ministers, 31 churches, and 1,255 members; and Rom. Cath., 2 dioceses (Covington and Louisville), 2 bps, 193 priests, 159 churches, 176 missions and stations, 32 monasteries and convents, 5 seminaries, 3 colleges, 3 academies and select schools, 90 parochial schools, 9 orphanages and asylums, and 5 hospitals.

Education.—In 1880 K. had 15 colleges and universities with 139 instructors, and 1,916 students; and a school population (6-20 years) of 545,161, of whom 265,581 were enrolled in the public schools, and 192,331 were in average daily attendance. The appropriation for the support of the public school system that year was \$1,162,944, of which \$1,025,659 was for teachers' salaries. In 1886-7 the school population was 656,736, white 549,592, colored 107,144; school districts 7,650, white 6,639, colored 1,011; school buildings 7,017; teachers 8,509; apportionment of school

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funds \$1,247,797, white \$1,044,224, colored \$203,573; and value of school property \$2,896,549. There were 15 colleges and universities, with 29 instructors and 798 students in the preparatory department, 113 instructors and lecturers and 1,589 students in the collegiate; \$960,885 in productive funds, \$59,238 income from productive funds, \$67,432 from tuition fees, \$51,722 from other sources, \$178,392 total income; 49,932 vols. in the libraries; and \$889,500 invested in grounds, buildings, and apparatus. Superior education for women was provided by Caldwell College (Presb. opened 1861) 14 professors and instructors and 180 students, and the Georgetown Female Seminary (Bapt. opened 1846) 11 professors and instructors and 108 students. A normal school for colored teachers was established by the legislature 1887 by a bill appropriating \$7,000 for a building and \$3,000 annually for the support of the school, no state provision had been made for a school for training white teachers, though the State Univ. had a normal department. According to a state law, three normal institutes were held 1887, one in each of the supreme court districts, and a desire was widely expressed for the establishment of a distinctive normal school for white teachers in the e., central, and w. parts of the state. Kindergarten instruction was provided in the K. institution for the blind at Louisville. The teachers of K. have a state association and a reading circle, the latter having a three years' course in history and art, pedagogy, science, and literature.

The various colleges of liberal arts are; St. Joseph's College, Bardstown, organized 1819 (Rom. Cath.); Berea College, Berea, 1855 (non-sect.); Ogden College, Bowling Green, 1877 (non-sect.); Centre College, Danville, 1821 (Presb.); Eminence College, Eminence, 1857 (Christian); K. Military Institute, Farmdale, 1845 (non sect.); Georgetown College, Georgetown, 1850 (Bapt.); South K. College, Hopkinsville, 1849 (Christian); K. Univ. (q.v.), Lexington, 1859 (Christian); K. Wesleyan College, Millersburg, 1866 (Meth. Episc.); Murray Male and Female Institute and W.K. Normal School, Murray, 1872 (non-sect.); K. Classical and Business College, N. Middletown, 1854 (Christian); Central Univ., Richmond, 1874 (S. Presb.); Bethel College, Russellville, 1854 (Bapt.); and St. Mary's College, St. Mary's, 1821 (Rom. Cath.). The special charitable, educational, and reformatory institutions of the state are the K. Institution for Deaf Mutes, at Danville, the fourth organized in the United States; K. Institution for the Education of the Blind, at Louisville; K. Institution for Feeble-minded Children, at Frankfort; 10 orphan asylums, 3 at Louisville; Eastern Insane Hospital at Lexington and Western at Hopkinsville. There is a penitentiary at Frankfort.

Illiteracy.—Persons 10 years old and upward enumerated 1,163,498, unable to read 258,186, unable to write 348,392, white's unable to write 214,497; foreign born whites enumerated 58,964, unable to write 5,701; whites 10-14 years old enumerated 173,312, unable to write 55,558, males 30,524, females 25,034; whites 15-20 years old enumerated 176,525, unable to write 34,216, males 17,964, females

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16,262; whites 21 years old and upward enumerated 623,438, unable to write 124,723, males 54,956, females 69,767; colored persons 10 years old and upward enumerated 190,223, unable to write, 133,895; colored 10-14 years old enumerated 34,068, unable to write 21,370, males 11,326, females 10,044; colored 15-20 years old enumerated 35,806, unable to write 21,787, males 11,092, females 10,695; colored 21 years old and upward enumerated 120,349, unable to write 90,738, males 43,177, females 47,561.

Finances and Banking.—In 1880 the assessed value of all taxable property was \$350,563,971; state debt \$1,089,856; total state, county, and municipal debts \$14,977,881. In 1888 the assessed valuation was \$492,653,132; state debt, funded, \$674,000, unfunded, none; receipts, \$5,637,130; expenditures \$5,634,984; amount raised by taxation \$3,572,434; rate of tax 47.5 per \$100. In 1889 there were 71 national banks (cap. \$14,189,400), 107 state banks, chiefly savings banks (cap. of those reporting any \$13,771,421), and 32 private banks and exchanges.

History.—The site of K. was embraced in the grant to the colony of Va. by the British crown, and included in Augusta county. For many years it remained an unknown country. In 1769 Daniel Boone (q.v.), a hunter and trapper, crossed the mountains with a small adventurous party from N. C., and began exploring the region. He found it to be a favorite hunting ground for various tribes of Indians, who resisted friendly overtures, and used all their cunning to prevent the whites from settling there. Boone explored a considerable part of the region, and his reports of the new country and the offer by Va. of bounties of land to her troops for services in the French Indian war, led to the organization of numerous companies for exploring and settling the region 'beyond the mountains.' The first white settlement was at the present Harrodsburg 1774, and Boone planted a colony at the present Boonesboro' 1775. In the latter year the settlers organized themselves as the assembly of Transylvania, but the Va. legislature pronounced the action void, and 1776 established the co. of K. from its territory s. of the Ohio and between the Big Sandy and Miss. rivers, and opened a court of quarter sessions at Harrodsburg. During the revolutionary war K. increased rapidly in settlers, and was the scene of numerous conflicts with Indians. Col. George Rogers Clark (q.v.) led an expedition of less than 200 men against the British forts on the n.w., and captured Kaskaskia and Vincennes 1778; and 1782, Aug. 19, a desperate battle occurred, near Blue Lick Springs, between 182 whites and about 600 Indians, in which the former were defeated. In 1774 the people began a movement for admission into the Union. Conventions were held 1785, 6, and 7, and in the last the delegates voted to form a state and prepare a constitution, but opposition in various ways and different quarters caused delays. Va. was loath to part with the region, and when she granted the settlers a separate organization 1785 the act was so burdened with conditions that it became inoperative. In 1790, the U. S.

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govt. made it a separate territory. The same year a convention was held, and a constitution reported and adopted. This was speedily ratified by popular vote, and 1792, June 1, K. was admitted into the Union, with a population of 75,000. The first constitution was in force till 1800, the second 1800-50, the third ever since. During the war 1812-15 K. contributed nearly 7,000 volunteers to the federal armies, and suffered severely in the battle of Frenchtown and in the attempt to relieve Fort Meigs; but 4,000 of her volunteers took part under Gov. Shelby in the victory on the Thames. In 1827 a system of internal improvements was inaugurated, comprising the making of many miles of macadamized roads and the improving of the facilities for navigation, on which the state expenditures alone were more than \$5,000,000. These improvements and the agitation over the state bank scheme produced a great financial depression 1833-37. At the outbreak of the Mexican war, 1846, 13,700 volunteers responded to the gov.'s call for 5,000 troops, and the men comprising the state's quota bore themselves through the war in a manner that brought frequent official commendation. At the beginning of the civil war the citizens were about evenly divided in interest, and attempted to keep the state in a neutral position. The legislature refused to call a state convention to consider the subject of secession, and passed resolutions that protested against federal coercion, and implored the s. states not to withdraw from the Union. But when Pres. Lincoln issued his first call for troops, the gov. said 'K. would furnish no troops for the wicked purpose of subduing her sister southern states,' and the legislature approved his response. The federal govt. at once established camps in the state. In 1861, Sep. Confederate and Union armies took possession of the state within a few days of each other. The gov., on the authority of the legislature, demanded the withdrawal of the Confederate army—the first to take possession—as violators of the state's neutrality, but the commander declined to remove unless the Union army also retired. This action led to active hostilities, during which the people flocked to both armies; but the Union force held the state almost continually till the close of the war, and was kept busy fighting raiders. Martial law was proclaimed 1864, July 5, and civil authority restored 1865, Oct. 18. During the war the state furnished 91,900 men to the Union armies, and 40,000 to the Confederate. The legislature of K. twice refused by large majorities to ratify the XVth amendment to the federal constitution, extending equal rights to the colored race.

Government.—The executive authority is vested by the constitution in a gov., elected for 4 years, salary \$5,000 per annum; the legislative in a general assembly, comprising a senate of 38 members elected for 4 years, and a house of representatives of 100 members elected for 2 years, salary of each \$5 per day, mileage 15c., biennial sessions. The judicial authority is vested in a supreme court, comprising a chief justice and 3 associate justices, salary of

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each \$5,000 per annum, and the usual subordinate courts. The sec. of state receives \$1,500 per annum; treas., \$2,400; auditor, \$2,500; attor.gen., \$500 and fees; insurance commissioner, \$4,000; 3 railroad commissioners, \$2,000; U. S. district judge, \$3,500; U. S. pension agent, \$4,000; register of land office, \$2,400, commissioner of agriculture, \$2,000; 6 internal revenue collectors, \$4,500 each; and 60 deputy collectors, \$300-\$2,000 each.

The successive govts., with their terms of service are as follows: Isaac Shelby 1792-96; James Garrard 1796-1804; Christopher Greenup 1804-8; Charles Scott 1808-12; Isaac Shelby 1812-16; George Madison 1816; G. Slaughter, acting, 1816-20; John Adair 1820-24; Joseph Desha 1824-28; Thomas Metcalfe 1828-32; John Breathitt 1832-34; J. T. Morehead, acting, 1834-36; James Clark 1836-39; C. A. Wickliffe, acting, 1839-40; Robert P. Letcher, 1840-44; William Owsley 1844-48; John J. Crittenden 1848-50; John L. Helm, acting, 1850-51; Lazarus W. Powell 1851-55; Charles S. Morehead, 1855-59; Beriah H. Magoffin 1859-61; James F. Robinson 1861-63; Thomas E. Bramlette 1863-67; John L. Helm 1867; J. W. Stevenson, acting, 1867-68; John W. Stevenson 1868-72; Preston H. Leslie 1872-75; James B. McCreary 1875-79; Luke P. Blackburn 1879-83; J. Proctor Knott 1883-87; Simon B. Buckner 1887-91.

Counties, Cities and Towns.—K. is divided into 118 counties. In 1880 the counties with more than 20,000 population were: Jefferson, 146,010, Kenton 43,983, Fayette 29,023, Daviess 27,730, Warren 27,531, Campbell 27,406, Logan 24,358, Graves 24,138, Christian 23,227, Hardin 22,564, Barren 22,321, Madison 22,052, Pulaski 21,318, and Mason 20,469. The chief cities were Louisville 123,758, Covington 29,720, Newport, 20,433, Lexington, 16,656, Paducah 8,036, Frankfort 6,958, Owensborough 6,231, Maysville 5,220, and Bowling Green 5,114. In 1889. Louisville reported pop. 200,000.

Politics—State elections, first Monday in Aug., in odd numbered years; congressional and presidential elections, Tuesday after the first Monday in Nov. Bribers, robbers, and forgers are excluded from voting. The state govt. (1890) is democratic, with a party majority of 26 in the senate, 40 in the house, 66 on joint ballot. K. has 13 electoral votes. Her votes for pres. and vice-pres. have been as follows: 1792, George Washington and Thomas Jefferson, 4; 1796, Thomas Jefferson and Aaron Burr; 1800, Thomas Jefferson and Aaron Burr; 1804, Thomas Jefferson and George Clinton, 8; 1808, James Madison and George Clinton, 7; 1812, James Madison and Elbridge Gerry, 12; 1816, James Monroe and Daniel D. Tompkins; 1820, James Monroe and Daniel D. Tompkins; 1824, Andrew Jackson 14, and John C. Calhoun and N. Sandford 7 each; 1828, Andrew Jackson and John C. Calhoun; 1832, Henry Clay and John Sergeant, 15; 1836, William Henry Harrison and Francis Granger; 1840, William Henry Harrison and John Tyler; 1844, Henry Clay and Theodore Frelinghuysen, 12; 1848, Zachary Taylor and Millard Fill.

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more; 1852, Winfield Scott and William A. Graham; 1856, James Buchanan and John C. Breckinridge; 1860, John Bell and Edward Everett; 1864, George B. McClellan and George H. Pendleton, 11; 1868, Horatio Seymour and Frank P. Blair, Jr.; 1872, Thomas A. Hendricks 8, and B. Gratz Brown 4 for pres., and B. Gratz Brown 8, Thomas E. Bramlette 3, and W. B. Macken 1 for vice-pres.; 1876, Samuel J. Tilden and Thomas A. Hendricks; 1880, Winfield S. Hancock and William H. English; 1884, Grover Cleveland and Thomas A. Hendricks, 13; 1888, Grover Cleveland and Allen G. Thurman.

Population.—(1790) white 61,133, free colored 114, slave 11,830, total 73,077; (1800) white 179,871, free colored 741, slave 40,343, total 220,595; (1810) white 324,237, free colored 1,703, slave 80,561, total 406,511; (1820) white 434,644, free colored 2,941, slave 126,732, total 564,317; (1830) white 517,787, free colored 4,917, slave 165,213, total 687,917; (1840) white 590,253, free colored 7,317, slave 182,258, total 779,828; (1850) white 761,413, free colored 10,011, slave 210,981, total 982,405; (1860) white 919,484, free colored 10,684, slave 225,483, total 1,155,684; (1870) white 1,098,692, free colored 222,210, total 1,321,011; (1880) white 1,377,179, free colored 271,511, total 1,648,690; (1889, Jan. 1) reported by state auditor, 2,200,000.

KENTUCKY RIVER: rising in the Cumberland Mountains, on the s.e. frontier of Ky., and after a winding n.w. course of 260 m., entering the Ohio, about 50 m. below Cincinnati. The river flows through most of its course between perpendicular limestone rocks, through which it appears to have worn its bed, and is celebrated for romantic beauty of scenery. It is navigable by steam-boats to Frankfort, 60 m.; and by means of 17 dams and locks, to the Forks. Its banks abound with anthracite, iron, and marble.

KENTUCKY UNIVERSITY: at Lexington, Ky.; chartered 1858, organized 1859, opened at Harrodsburg under the auspices of the Christians (Disciples), and removed to Lexington 1865. It comprises a college of arts, agricultural and mechanical college (merged with it 1865), college of the Bible, commercial college, and college of law, and occupies a large tract of land, the agricultural dept. alone having 433 acres, part of which was the Ashland home of Henry Clay. In 1886-7 there were 2 instructors and 36 students in the preparatory department, 9 members of the faculty, one additional instructor, and 153 students in the collegiate. There was one endowed professorship; 13,287 bound vols. in the library; grounds, buildings, and apparatus valued at \$145,000; productive funds \$200,000; income therefrom \$14,805, tuition fees \$2,060, other sources \$372, total income \$17,237; degrees conferred at last commencement 9. The pres. was Charles Louis Loos.

KENYON COLLEGE, *kèn'yon*: at Gambier, Ohio; chartered 1824, organized 1826, under the auspices of the Prot. Episc. Church. It was established through the efforts of Bp. Philander Chase, chiefly by contributions collected in

KEOKUK—KEPLER.

England. In 1886-7 there were 7 instructors and 73 students in the preparatory dept., 58 students in the collegiate, and 9 members of the faculty. There were 8 endowed professorships; 20,000 bound vols. in the library; grounds, buildings, and apparatus valued at \$270,000; productive funds \$240,000; income therefrom \$17,250, tuition fees, \$2,275, total income \$19,525; degrees conferred at last commencement 11. The pres. was the Rev. William B. Bodine, D.D.

KEOKUK, *kě'ō kùk*: city, one of the caps. of Lee co., Io.; at the foot of the lower rapids of the Mississippi river near the confluence of the Des Moines river, on the St. Louis K. and Northwestern, the K. and Des Moines, the Toledo Peoria and Warsaw, the Mississippi Valley and Western, and the K. and St. Paul railroads; 46 m. s. of Burlington, 161 m. e.s.e. of Des Moines, 205 m. n. of St. Louis, 250 m. w.s.w. of Chicago. The Mississippi river here is a m. wide, bordered with bluffs nearly 150 ft. high, and spanned by a railroad bridge connecting K. with Warsaw, Ill. The city is beautifully laid out and well built; supplied with modern water, sewage, gas, electric, and fire systems; contains 17 churches, medical college, law school; 6 public school buildings, 1 national bank (cap. \$100,000), 2 state banks (cap. \$250,000), and 1 private bank, public library, and U. S. court. It has several large pork-packing establishments and manufactories. Exceptional water-power has been secured by the construction around the rapids of a ship-canal 9 m. long and about 300 ft. wide by the U. S. govt. at an expense of \$8,000,000. Pop. (1860) 8,136; (1870) 12,766; (1880) 12,117; (1885) 13,151.

KEP, v. *kěp* [AS. *cépan*, to take, to catch]: in *Scot.*, to catch anything when falling; to intercept; to meet accidentally. KEP'PING, imp. KEPPED, pp. *kěpt*.

KEPHALINE, n. *kěf'ă-lîn* [Gr. *kephalē*, the head]: a phosphorized constituent of the brain.

KEPLER, or KEPLER, *kěp'lér*, JOHANN: one of the greatest astronomers of all ages: 1571, Dec. 27—1630, Nov. 15; b. Weil, duchy of Württemberg. His parents were not happy in their married life, and were poor; and K's. father abandoned his family, and enlisted as a soldier. Thus while a mere child K. was left to his own resources, and his early education in consequence would have been entirely neglected had he not been admitted into the convent of Maulbronn. He afterward studied at the Univ. of Tübingen, and gave nearly the whole of his time to mathematics and astronomy. In 1593, he was appointed prof. of mathematics at Grätz. At this time K.'s views of astronomy, as seen in his *Prodromus*, were somewhat mystical; he supposed the sun, stars, and planets were typical of the Trinity, and that God distributed the planets in space in accordance with the regular polyhedrons, etc. Yet this searching after harmony led him to the discovery of the three remarkable truths called *Kepler's laws*. K., about 1596, began a correspondence with Tycho Brahé, and 1599 went to Prague to aid him in his researches.

KEPLER.

Tycho obtained for him a government appointment; but the salary was not paid, and K. lived 11 years there in straitened circumstances. He then obtained a mathematical appointment at Linz; but, 1628, left the service of Emperor Ferdinand II., who owed him 12,000 florins, and entered the service of the Duke of Friedland (Wallenstein), who assumed responsibility for the debt. Wallenstein, instead of paying, offered K. a professorship in the Univ. of Rostock, which K. declined. A journey to Ratisbon to present his case to the Diet, brought on a fever of which he died at that place.—K.'s connection with Tycho Brahé had a salutary effect upon his fiery enthusiasm, but, happily for science, the timid counsels of the old astronomer were only partially followed. K. established the law of the diminution of light in proportion to the inverse square of the distance, and was acquainted with the fact 'that the attractive force of the sun decreases as his light;' it is strange that this latter fact did not lead him to anticipate the discovery of Newton. In 1609, he published *Astronomia nova*, a commentary on the motion of Mars, in which, taking for his base of operations the observations of Tycho, he determined the eccentricity and aphelion of this planet, on the supposition of a circular orbit, and found the results quite irreconcilable with observation. This led him to his first law, *that the planets move in ellipses with the sun in one of the foci*. The second law, that *the Radius-vector (q.v.) sweeps over equal areas in equal times*, he at first asserted dogmatically, and was for a long time puzzled to find some proof of it (the infinitesimal calculus not having at that time been invented); but at last he hit on the expedient of dividing the ellipse into an immense number of small triangles, whose areas could be easily found. His third law (the first discovered) was an attempt to harmonize in some way the period and the mean distance of the planets, and after 22 years of vigorous application, he discovered that *the square of the periodic time is proportional to the cube of the mean distance*. These discoveries, great as they undoubtedly are, are rendered still more so when we take into account the little real knowledge of the heavenly bodies existing at that time, and the scanty means in the hands of astronomers for making discoveries. K. also affirmed the essential inertia of matter, the first of Galileo's laws of motion; the dependence of the curvature of the path of planets on the attraction of the sun (K. unfortunately thought it was *magnetic* attraction), and the proportionality of the mutual attraction of bodies to their respective masses; he demonstrated the four new planets of Galileo to be satellites of Jupiter; gave a complete theory of solar eclipses; and calculated the exact epoch of the transits of Mercury and of Venus across the sun's disk. He takes rank as the founder of a new astronomy. He also made numerous discoveries in optics, general physics, and geometry. A collected ed. of K.'s works was published by Frisch (1858-71).—See Brewster's *Lives of Galileo, Tycho de*

KEPT—KERGUELEN'S LAND CABBAGE.

Brahe, and K. (1841); and *Reitlinger, Neumann, and Gruner, Johannes K.* (1868).

KEPT: pt. and pp. of KEEP, which see.

KERARGYRITE, n. *kě-râr'jî-rît* [Gr. *keras*, horn; *argyros*, silver]: chloride of silver; horn-silver: also called KERATE, n. *kě'rât* [Gr. *keras*, horn].

KERATIN, or KERATINE, n. *kě'r-â-tîn* [Gr. *keras*, a horn]: one of a group of nitrogenous non-crystalline substances allied to the proteids; the principal chemical substance of horn, nails, feathers, hair, and other epidermal structures (see PROTEINE). KERATODE, n. *kě'r-â-tôd* [Gr. *eidos*, resemblance] the horny substance making up the skeletons of many sponges. KERATOSA, n. *kě'r-â-tô'zâ*, the division of sponges having the skeleton composed of keratode.

KERATITIS, n. *kě'r-a-tî'tis* [Gr. *keratos*, a horn]: inflammation of the cornea, with congestion of the conjunctiva and sclerotic coat of the eye.

KERATOME: see IRIDECTOME.

KERAULOPHON, n. *kě'r-awl'o-fôn* [Gr. *keratos*, a horn; *aulos*, a flute; *phônē*, sound]: an organ stop, invented by Gray and Davison. Its pipes are of small scale, and surmounted by a movable ring of metal. Its tone is soft, delicate, and reedy.

KERB, n. *kěrb*, or KERB-STONE, or KIRB-STONE [Ger. *scherbe*, a potsherd: Dut. *kerf*, a piece cut out: another spelling of CURB, which see]: a frame, as of stones, laid round the brim of a well; a raised border of stones, as along a footpath.

KERCHIEF, n. *kě'r'chîf* [OF. *couvrechef*, a covering for the head—from OF. *couvrir* and F. *couvrir*, to cover; *chef*, the head—from L. *caput*, the head]: formerly, a cloth used as a head-dress; any separate piece of cloth used in dress; now generally used in its compounds *handkerchief* and *neckerchief*—which see. KERCHIEFED, or KERCHIEFT, a. *kě'r'chîft*, dressed; hooded.

KERF, n. *kěrf* [AS. *cyrf*, a cutting; Ger. *kerbe*, a notch]: a slit; a cut; a notch; slit, notch, or channel made by a saw in cutting wood.

KERGUELEN'S LAND, *kěrg'e-lěnz*, F. *kěr-ga-lông'*, or ISLAND OF DESOLATION: in the Southern or Antarctic Ocean; the latitude and longitude of its southern extremity, Cape George, being 49° 54' s., and 70° 12' e. It is about 100 m. long, and about 50 m. broad. It consists chiefly of moss-covered rocks of primary formation. It is said, however to produce coal fit for steam-ships. The island was discovered 1772 by the French navigator, Ives Joseph de Kerguelen Tremarec.

KERG'UELEN'S LAND CABBAGE (*Pringlea antiscorbutica*): only known species of a very curious genus of plants of nat. ord. *Cruciferae*, found only in Kerguelen's Land. It has a long, stout, perennial root-stock; a *bolled* head of leaves very similar to those of the common garden

KERITE—KERMANSHAH.

cabbage. Captain Cook first discovered this plant, and directed attention to it. It is exceedingly abundant in all parts of Kerguelen's Land, which produces only 17 other flowering plants. The root-stocks have the flavor of horseradish. The dense white heart of the cluster of leaves tastes like mustard and cress, but is coarser. The whole foliage abounds in a very pungent pale-yellow essential oil, confined in vessels parallel to the veins of the leaf. The K. L. C. is used by voyagers, boiled either by itself, or with beef, pork, etc., and its antiscorbutic qualities make it important to them.

KERITE, n. *kēr'īt* [Gr. *keros*, wax]: a compound invented by Austin C. Day, and by him termed *kerite* or artificial caoutchouc, and in which the raw caoutchouc or rubber is replaced by tar or asphaltum, which, combined with animal or vegetable oils, is vulcanized by sulphur, the product closely resembling rubber, and used principally as an insulating material in telegraphy.

KER'KI: town of Bokhara, central Asia, about 120 m. s. of Bokhara city, on the left bank of the Jihoon or Oxus. K. is a place of considerable importance, being a frontier fortress, and the key to Bokhara on the side of Herat. The town, which is spread around the fortress, consists of 150 houses, 3 mosques, a small bazaar, and a caravanserai; it is defended also by a good wall and deep ditch. The inhabitants are Uzbeks and Turkomans, employed a little in trade, but more in agriculture.

KERMAN, *kēr-mân'*, or **KIRMAN** (ancient *Carmania*): one of the eastern provinces of Persia, s. of Khorassan; area about 59,000 sq. m. The n. and n.e. are occupied by a frightful salt waste, the *Desert of Kerman*, part of the great central desert of Iran. On this extensive tract, not a blade of grass is seen. The s. portion, although mountainous, is equally arid and barren with the n., except the small tract of Nûrmanshir, toward the e., which is fertile and well-watered. Roses are cultivated for the manufacture of 'attar of roses.' Silks and various gums are exported. Cattle, sheep, goats, and camels are reared, and the hair of the last two is notable for its length and fineness. The inhabitants are chiefly Persians proper; the rest are Guebres or Parsees, Blûchis, and other wandering tribes: pop. abt. 300,000.

KERMAN, the chief town, near the middle of the province, in the central mountain range, has pop. estimated at 30,000. The manufactures are chiefly shawls, carpets, and matchlocks. The trade, though still considerable, is very small compared with what it was during the last century, when K. was the great emporium for the trade by the Persian Gulf and the Indian Ocean. In 1794, it was taken and pillaged by Aga Mohammed, and 30,000 of the inhabitants made slaves. But the chief cause of the decline of its trade was the decay of Gombroon (q.v.), its port, before the rising prosperity of Bushire.

KERMANSHAH, *kēr-mân-shâ'*, or **KIRMÁNSHÁHÁN**: flourishing modern town of Persia, province of Ardelan,

KERMES—KERMESSE.

near the right bank of the river Kerkhah. It is the centre of converging routes from Bagdad, Tehran, and Ispahan. Its commerce is considerable, and there are manufactures of carpets and weapons. Pop. 30,000.

KERMES, n. *kér'mēz* [Ar. *karmas* or *kermes*, little worms]: sometimes known in commerce as *Scarlet Grain*; a dyestuff which consists of the bodies of the females of a species of *Coccus* (q.v.) (*C. ilicis*). It has been supplanted over the greater part of Europe by Cochineal (q.v.), but is still used in some parts of s. Europe, and more extensively in India and Persia. The K. insect is abundant in these regions, attaching itself to the leaves of a small species of oak, the K. Oak (*Quercus coccifera*), a low bushy shrub with 'evergreen spinous leaves, much resembling a holly. In some parts of Spain, the K. Oak grows in great profusion, as on the slopes of the Sierra Morena. Many of the inhabitants of Murcia live by collecting Kermes. This is chiefly the employment of women, who scrape the insects from the trees with their nails, which they suffer to grow long on purpose. The K. insect attacks the young shoots of the shrub, the female affixing itself and remaining immovable till, after attaining its full size, about that of a pea, it deposits its eggs, and dies. K. is gathered before the eggs are hatched. It is thrown into vinegar, and afterward dried in the sun or in an oven. It has been employed from time immemorial to dye cloth of a blood-red color. It was called *Thola* by the Phœnicians, *Coccus* by the Greeks, K. by the Arabians. From K. comes the French *cramoisi*. It is supposed to have been the substance employed in dyeing the curtains of the Jewish tabernacle (Exod. xxvi.).

KERMES, *kér'mēz*, or **KERMESITE**, *kér'mē-sīt*, or **KER'MES MIN'ERAL** [from its resemblance in color to the insect *Kermes*]: an antimonial preparation discovered by Glauber (q.v.). The method of preparing it subsequently became known to M. de la Ligerie, from whom the king of France purchased the prescription in the early part of the 18th c. It was at that period often described as *Carthusian Powder*, or *Poudre des Chartres*, in consequence of a Carthusian friar having effected some remarkable cures by it. Chemists differ slightly as to its composition, but it is generally regarded as a tersulphuret of antimony. K. is much used in France and Italy, though seldom in England and the United States. Its effects are much the same as those of the golden sulphuret (sulphide) of antimony, and of the oxy-sulphuret of antimony of the London pharmacopœia, it being a sudorific in small doses (e.g. half a grain), and an emetic and purgative in large doses.

KERMESSE, *kér'mēss*, or **KIRMESS**, *kīr'mess*: religious festival originally held in Belgium and Holland under the patronage of the clergy, and comprising a variety of popular amusements and athletic exercises, and usually closing with a grand dinner. It was generally held out-of-doors and attracted the old and young of the parish. To prevent the degeneracy of a harmless custom and an overcrowding of the K. ground by having the festivals occur at different

KERN—KERN RIVER.

times in different parishes, James II. of Flanders ordered that all should be celebrated on the same day.—The term K. is sometimes applied in the United States to a combination of sociable and fair in aid of a church or for some benevolent object.

KERN, n. *kérn* [Ger. *kern*, kernel]: that part of a type which hangs over the body or shank: V. to form into a kern. KERN'ING, imp. KERNED, pp. *kérnd*.

KERN, n. *kérn*: another spelling of QUERN, which see.

KERN, or KERNE, n. *kérn* [Ir. *cearn*, a man: Gael. *ceathairneach*; a stout trusty peasant, a soldier; *ceathairne*, the peasantry, a party of freebooters]: in *Ireland* and *Scotland* in former times, a foot-soldier of the lowest class armed with inferior weapons; a cateran; an idle person or vagabond.

KERN, *kérn*, J. CONRAD: Swiss statesman: b. 1808, near Arenenberg, in Thurgau. He studied theology at Bâle, but turned to law, which he studied successively at Berlin, Heidelberg, and Paris. On his return to his native canton, he was appointed to the presidency of the supreme court and of the council of public instruction; and in these offices he was remarkable for legal and administrative sagacity. When in 1838 the French government demanded the extradition of Prince Napoleon, K. was most prominent at the Diet in stirring up the Swiss to refuse to be intimidated. In 1848, K. was active in the preparation of the federal constitution. He afterward established the Polytechnic School of Zürich, one of the most admirable institutions of its kind in Europe. In 1857 he was selected to complete the negotiations regarding the dispute with Prussia; and at the conferences of Paris between the great powers, K. represented Switzerland.

KERNEL, n. *kér'nél* [Icel. *kiarni*, pith: F. *cerneau*, kernel of a nut: Ger. *kern*, pip of fruit—from *korn*, grain]: the substance contained within the shell of a nut or the stone of a fruit; the central part of anything; a small mass around which other matter is concentered; in *bot.* the embryo inclosed in the seminal integuments: V. to harden or ripen into a kernel. KER'NELLING, or KERNELING, imp. KERNELLED, or KERNELED, pp. *kér'néld*. KER'NELLY, ad. -*lly*.

KERNER, *kérnér*, JUSTINUS ANDREAS: 1786, Sep. 18—1862, Feb. 21; b. Ludwigsburg in Würtemberg: German poet, one of the leading members of the so-called 'Swabian School'. He studied medicine at Tübingen, and finally settled as physician at Weinsberg, where he died. The conspicuous qualities of K.'s poetry are dreamy fancy and original humor. His chief works are—*Reiseschatten von dem Schattenspieler Lux* (1811); *Romantische Dichtungen* (1817); and *Der letzte Blütenstrauß* (1853). He took keen interest in the phenomena of animal magnetism or hypnotism, and wrote several books on the subject, one of which, *Die Seherin von Prevorst* (1829; 4th ed. 1846), excited great attention in America.

KERN RIVER, *kérn*, and KERN RIVER SLOUGH, *slow*:

KEROLITE—KERSEY.

stream and swampy water-course in Cal. The *river* rises in the Sierra Nevada Mountains in Tulare co., Cal., flows through a very deep cañon between Mt. Whitney and Kaweah Peak, runs first s., then w. into Kern Lake, then n.w. into Kern co., and enters Tulare Lake, estimated length 200 m. The *slough* is a channel n. of Tulare Lake, by which it discharges its surplus water into San Joaquin river.

KEROLITE, n. *kér'ô-lît* [Gr. *keros*, wax; *lithos*, a stone]: a native hydrated silicate of manganese, which occurs in kidney-shaped masses of a white, yellow, or green color.

KEROSENE, or **KEROSENE OIL**, n. *kér'ô-sên oyl* [Gr. *keros*, wax, and Eng. *oil*]: oil distilled from bituminous substances, and employed for lighting purposes. Since the discovery of oil-wells yielding vast quantities of petroleum, the manufacture of K. has nearly ceased, and the name is scarcely used in the trade, having given place to the terms crude or refined petroleum: see **PETROLEUM**: **BITUMEN**: **NAPHTHA**: **OIL-WELLS**: **PARAFFINE OIL**. **KEROSOLINE**, n. *kér'ô-so-lên*, petroleum ether, extremely inflammable, colorless oil, having a faint odor of petroleum, obtained from the crude oil by distillation.

KERR, **ORPHEUS C.**: see **NEWELL**, **ROBERT HENRY**.

KERRY, *kér'ri*: maritime county in the s.w. of Ireland, province of Munster; bounded n. by the mouth of the Shannon, and w. by the Atlantic Ocean; 1,185,917 statute acres, of which 414,614 are arable, 726,775 are uncultivated, and 32,761 are under water. In 1881, the total acreage under crops was 165,568, half in meadows and pasture, the rest chiefly in oats and potatoes. The county is 60 m. in length from n. to s., and 58 m. broad. Its coast-line is about 220 m. in length, fringed with islands, of which the chief are Valentia, the Blasquets, and the Skelligs, and is deeply indented by Kenmare, Dingle, and Tralee Bays. Between these bays are two peninsulas, occupied by branches of the mountain system, which, stretching from the county of Waterford, traverses the whole south of Ireland. The principal group is that of Macgillicuddy's Reeks, the chief summit of which, Carran Tual, 3,414 ft., is the highest in Ireland. The largest rivers are the Laune, the Maine, and the Cashen. The county contains numerous lakes, some of them, especially those known as the Lakes of Killarney (q.v.), of exquisite beauty. The climate is mild, but moist, especially on the coast. The soil rests on slate and sandstone, with limestone; consists of a rich loam in the central districts, and is productive in grain-crops and in pasture. The manufactures are inconsiderable; oats and butter are chief exports. Fisheries on the coast are extensive and profitable, employing 3,000 men and boys. Pop. (1871) 196,014; (1881) 201,039.

KERSEY, n. *kér'zî* [F. *carisée*; Sw. *kersing*]: a coarse cloth woven from long wools. **KER'SEYMERE**, n. *-mēr* [derived by some from *Cashmere*, in India, famous for its fine stuffs]: a superior cloth woven from the finest wools, differing from ordinary *broadcloth* by being woven as a *twill*:

KERSHAW—KESTREL.

see TWILL. This kind of cloth is distinguished from the common cloth by the diagonal ribbed appearance of its under side, where the nap not being raised, admits of its structure being seen. *Note.*—KERSEY is also said to be named after a small place named *Kersey* in Suffolk, where the woollen trade was once carried on, in which case *F. carisée*, Sw. *kersing*, are mere corruptions of Eng. *kersey*: *kerseymere* is a corrupt spelling of *Cassimere* or *Cashmere*, due to a confusion with *kersey*, a material of quite a different texture—see Skeat.

KERSHAW, *kér-shaw'*, JOSEPH BREVARD: lawyer: b. Camden, S. C., 1822, Jan. 5. He received an acad. education, was admitted to the bar 1843, served in the state senate 1852–57, and the state convention 1860, entered the Confederate army as col. of the 2d S. C. regt., was present at the first battle of Bull Run 1861, July, promoted brig.gen. 1862, led the attack of Longstreet's corps at Gettysburg 1863, July; was in the battle of Chickamauga and siege of Knoxville, promoted maj.gen. 1864, commanded a div. in Lee's final campaign, surrendered 1865, Apr. 6, and was imprisoned in Fort Warren till 1865, July. He has since been pres. of the S. C. senate, member of the conservative convention, and from 1877 judge of the 5th circuit court.

KERTCH, *kèrch* (anc. *Panticapæon*): previous to 1855, the most important port of the Crimea, with the largest trade in the export of corn. It is on the e. shore of the peninsula, on the strait of Kaffa or Yenikale. The town has a distinctively eastern air; and the appearance of the houses is greatly enhanced by their pillars and balconies. The streets, like those of Constantinople, are infested by troops of homeless dogs. K., the ancient *Panticapæum* or *Bosporus*, was cap. of ancient Taurica. Previous to 1475, it belonged to the Genoese; subsequently, it came into the hands of the Turks; and 1774, it was acquired by the Russians. 1855, May 25, it was taken by the allies during the Crimean War, on which occasion the Catacombs, a very valuable collection of antiquities connected with early Greek times, was ruthlessly plundered by the soldiery. Pop. (1880) 22,449.

KERVE, v. *kéro* [Dut. *kerven*, to cut or carve]: OE. for CARVE, which see. KERV'ING, imp. KERVED, pp. *kèrød*.

KESH'UB CHUN'DER SEN: see SEN, KESHUB CHUNDER.

KESTREL, n. *kës'trèl* [Norm. F. *cresserelle*; F. *crécerelle*], (*Falco tinnunculus*): small species of falcon, and one of the most common of the *Falconidæ* in Britain, where it is often called *Wind-hover*. It is rather larger than the merlin, its whole length being 13 to 15 inches. It may be at once recognized by its peculiar habit of hovering or sustaining itself in the same place in the air by a rapid motion of its wings, always with its head to the wind, evidently looking for prey on the surface of the ground. Its prey consists in great part of mice; and though of course included by gamekeepers in the large category of 'vermin,' and destroyed on every opportunity, it deserves careful

KESWICK—KETCH.

protection by farmers, as a check to the excessive multiplication of mice. It more rarely captures small birds, and does not disdain cock-chafers and other insects. It is very widely distributed. The male and female differ considerably in color; ash-gray prevailing more in the former,



1

2

Kestrels (*Falco tinnunculus*):

1, the male; 2, the female.

and rusty brown in the latter. The American species (*Tinnunculus sparverius*) is a beautiful little bird, popularly called the Sparrow-hawk.

KESWICK, *kěz'wík* or *kěz'ík*: market-town of England, county of Cumberland; in a charming district on the Greta, at the n. extremity of Derwentwater, 22 m. s.s.w. of Carlisle. Manufactures of coarse woolen cloth and blankets are carried on here. In the vicinity, at Borrowdale, black-lead mines are worked; and K. is well known for the black-lead pencils here made. Pop. (1871) 2,777; (1881) 3,219.

KESZTHELY, *kěst-hěly'*: market-town of Hungary, county of Szalad; on the w. shore of Lake Balaton, 96 m. s. of Presburg. The breeding of horses is carried on, and there is trade in corn. Pop. (1880) 5,387.

KETCH, n. *kěch* [Dut. *kits*; F. *caiche*—from Turk. *qaiq*, a boat, a skiff]: broad, strongly built vessel of two masts—viz., the main and mizzen. It is now almost obsolete, but formerly was the favorite form for state yachts, and still more recently, was the prevailing mortar-boat. In this latter capacity it was called a bomb-ketch. *Note*.—Dut. *kits*, F. *caiche*, are said to be borrowed from the Eng. word *ketch*—see Skeat.

KETCH, or **JACK KETCH**, n. *ják kěch* [from *John Ketch*,

KETCHAM—KETTERING.

the hangman or executioner in the reign of James II. of Eng.]: the hangman. *Note*.—It is said that *Jack Ketch* was merely a popular corruption of the man's real name, *Jaquette*.

KETCHAM, *kěch'am*, JOHN H.: legislator: b. Dover, N. Y., 1832, Dec. 21. He received an acad. education, engaged in agriculture, was member of state assembly 1856-7 and senate 1860-1, entered the Union army as col. 150th N. Y. regt. 1862, promoted brig.gen. and served till 1865, Mar., when he was brevetted maj.gen. and resigned to take his seat in congress to which he had been elected as a republican. He served there 1865-73, was a delegate to the national republican convention 1876, was re-elected to congress 1876, and has since been re-elected for each succeeding term, his last one expiring 1891.

KETCH'O, or KESH'O: see CACHAO.

KETCHUM, *kěch'um*, WILLIAM SCOTT: 1813, July 7—1871, June 28; b. Norfolk, Conn.: soldier. He graduated at the U. S. Milit. Acad. 1834, was promoted capt. 1842, maj. 1860, brig.gen. vols. 1862, brev.maj.gen. vols. 1865, and was retired 1870. He served in the Seminole Indian war, on garrison duty, and in the inspector-general's, quartermaster-general's, and adjt.general's departments.

KETCHUP, *kěch'up*, or CAT'SUP, or CATCH'UP [said to be the E. Indian or Japanese word *kitjop*, denoting a similar compound]: a name common to several esteemed kinds of sauce, much used with meat, fish, toasted cheese, etc. The name was originally restricted to sauces having as their basis mushrooms or other edible fungi; but is now variously applied—MUSHROOM KETCHUP is made from the common mushroom (*Agaricus campestris*), by breaking it into small pieces, and mixing it with salt—which so acts upon it as to reduce the whole mass to an almost liquid state—straining, and boiling down to about half the quantity. Spices of different kinds are added, for which there are many receipts, and sometimes wine. Mushroom ketchup must be kept in tightly-corked bottles.—WALNUT KETCHUP is made from unripe walnuts, before the shell has hardened. They are beaten to a pulp, and the juice separated by straining. Salt and vinegar are added, also spices variously, and after considerable boiling down, the ketchup is bottled, and may be kept for years.—TOMATO KETCHUP is made in a similar manner from tomatoes. These are the three most esteemed kinds. In preparing and keeping all kinds of K. it is important to avoid the use of copper, lead, or pewter vessels or implements, as these are liable to make the preparation poisonous.

KETONES, n. plu. *kě'tonz* [an adaptation of the word *acetone*, one of the best known *ketones*]: in *chem.*, bodies derived from aldehydes—which they resemble in constitution—by the substitution of an alcohol radical for an atom of hydrogen. The principal K. are acetone, propione, ethyl butyral, butryone, and benzophenone.

KETTERING, *kět'těr-ing*: market-town of England, county of Northampton, 13 m. n.n.e. of the town of Northampton. The parish church is large and handsome,

KETTLE—KEVEL.

with a tower, dating from about 1450. It has a town hall and corn exchange. Boot and shoe-making is the chief occupation; there are also silk-weaving, plush, and wool-combing. Pop. (1881) 11,093.

KETTLE, n. *kět'l* [Ger. *kessel*; Goth. *katil*; Dan. *ketel*; Russ. *kotel*, a kettle: L. *catillus*, a small bowl or dish]: a metal vessel of various shapes and dimensions used for heating water, etc., and in cooking food. **KETTLE-DRUM**, drum formed by stretching vellum over the circular edge of a hemispherical vessel of brass or copper. This instrument, which gives forth a sharp, ringing sound, is used by regiments of cavalry and horse artillery in lieu of the ordinary cylindrical drum, which would, from its shape, be inconvenient on horseback. The name was applied in the British army in India to a social gathering in which kettle-drums served in lack of tables to hold tea cups and plates. Thence it passed into familiar use in England and America for an informal party, with simple refreshments and everyday attire—especially for such a party in the late afternoon. **KETTLE OF FISH**, at a *picnic*, newly caught salmon cooked in a kettle in the open air, and eaten thus cooked along with the other provisions: see **KIDDLE** as to probable origin.

KETUPA, n. *kě-tū'pa* [a barbarous name with no meaning]: the Indian fish owl.

KEUPER, n. *köy'për* [Ger. *keuper*—from *kupfer*, copper]: in *geol.*, the upper division of the Trias group of strata; consisting in the typical German series of a thickness of more than 1,000 ft. of (1) various colored sandstones, (2) marls, with gypsum and dolomite; (3) a series of carbonaceous slate-clay, with gray sandstones and small irregular beds of impure earthy coal. In Britain, it consists of (1) an extensive series of red marls, with large deposits of rock-salt and gypsum; (2) white and brown sandstones with beds of red marl. The whole reaches a maximum thickness of 1,300 ft. The K. occupies a large portion of the valleys of the Ouse and the Trent, and is extensively developed in Worcester, Stafford, and Cheshire, where beds of salt, often as much as 80 or 100 ft. in thickness, occur. The K. does not abound in fossils. The contained organisms differ from those of the Permian and older periods; they have the general appearance of the fossils of the Lias and Oolite. The plants consist of ferns, equisetum-looking plants, cycads, and conifers. The character of the rocks, and the quantity of oxide of iron, which seems to have been injurious to life, account for the paucity of fossils. The strata are of interest to the paleontologist chiefly because of the numerous footprints they contain (see **ICHNOLOGY**), and the remains of the reptiles which produced them, as well as because in them are found the only observed fragments—the teeth—of the oldest mammal yet known. See **MICROLESTES**.

KEVEL, n. *kěv'ël* [Icel. *kefli*; Dan. *kieve*, a short staff, a peg]: in a *ship*, a piece of timber on which the sheets and larger ropes are belayed; a species of antelope; a Derby-

KEW—KEY.

shire mining term for a sparry substance found in the veins or seams; in *OE.*, a gag for the mouth; a bit for a horse.

KEW, *kū*: small village in Surrey, England, on the right bank of the Thames, six m. w. of Hyde Park Corner. On the opposite side of the river is Brentford, with which K. is connected by a bridge. The most interesting object at K. is the Royal Botanic Gardens, containing a large and choice collection of plants, native and exotic. The hot-houses and conservatories are very numerous. There are also a *palm-house*, 362 ft. by 100, and 60 ft. high; a *temperate-house*, of the same height, occupying three-fourths of an acre; and a *museum*. The gardens extend over about 75 acres; and the pleasure-grounds connected with them, 240 acres. The Botanic Gardens were commenced by the mother of George III., but owe much of their celebrity to the able management of Sir W. J. Hooker (q.v.). Since 1840 they have been open to the public in the afternoons, Sundays not excepted. There is also an observatory, which, however, is used chiefly as a meteorological station. So much glass is there that one hailstorm in 1879 smashed 18 tons of glass. In 1881 there were 836,676 visitors to the gardens.

KEWA'TIN: see KEEWATIN.

KEW-KEANG-FOO, *kū-kā-āng-fō* or KIU-KIANG, *kū-kē-āng'*: city in China, province of Keang-se, 227 m. s.w. of Nankin, on the s. bank of the Yang-tsze Keang 15 m. above the point where the outlet of the Po-yang lake empties into that river; 29° 42' n. lat., 116° 8' e. long. It is a walled city, has been several times besieged, and has had repeated change of name. It was one of the ports opened by the British treaty with China 1861, and immediately increased in trade and population. It is one of the most convenient points of outlet from the green-tea district. K. has large American and English commerce: the value of its exports in one year has been stated at more than \$125,000,000. It was nearly destroyed in the Tai-ping rebellion, 1853, Feb. Pop. (1861) 10,000; (1863) 40,000; (1889) prob. abt. 50,000.

KEX, n. *kēks*, KEXES, n. plu. *kēks'ēz* [*W. cecys*, hollow stalks, hemlock: *W. cegid*: *L. cicuta*, hemlock: comp. Gael. *caoc* = *kēk*, dry, hollow, empty]: in *OE.*, the dry hollow stalks of hemlock, reeds, and the like: also spelled KEKSIES, n. plu. *kēks'ēz*, in Shakespeare.

KEY, n. *kē* [*AS. cæg*; *Fris. kay*; *Gr. kleis*, the key of a lock: *L. clavis*, a key—from *claudo*, I close or shut up]: instrument for shutting and opening locks; an instrument by which something is turned; that which explains or solves a difficulty; the examples or questions of a book of arithmetic, algebra, etc., worked out; the exercises of a grammar, etc., correctly performed; the literal Eng. translation of a foreign author, especially L. or Gr.; the explanation of the use and application of the symbols of a cipher; the small lever in a musical instrument—as in a pianoforte; the fundamental note in a piece of music: see below, KEY, in Music. In *her.*, common heraldic bearing in the insignia of sees and religious houses, particularly such as are under the patronage of St. Peter. In secular heraldry, keys

KEY.

sometimes denote office in the state. **KEYED**, a. *kēd*, furnished with keys. **KEY'LESS**, a. *-lē's*, without a key. **KEY-BOARD**, the range of keys of an organ or pianoforte (see **FINGER-BOARD**). **KEY-COLD**, in *OE.*, cold as a large metallic key; cold; lifeless. **KEY-HOLE**, a hole in a door or lock for admitting a key. **KEY-NOTE**, the fundamental or leading note in a piece of music: see **KEY**, in **Music**. **KEY-STONE**, the highest central stone of an arch. **KEY OF A POSITION**, in *mil.*, a particular place, the possession of which is necessary in order to render a camp or military district tenable. **KEY OF THE MEDITERRANEAN**, the fortress on the rock of Gibraltar at its entrance. **QUEEN'S KEYS**, in *Scotch law*, that writ, or that part of a warrant which authorizes the messenger or bailiff to break open the outer door of the house of the debtor, in executing a caption or warrant under an extract decree. Such writ or warrant is called sometimes, letters of open doors: see **HOUSE**, in **Law**.

KEY, n. *kē*: a wharf, rather spelled **QUAY**—which see.

KEY, in **Music**: term synonymous with *scale*, from *scala*, a stair. The diatonic scale, as produced by nature, is a certain succession of tones and semitones, ascending from any sound taken as a basis to the octave of that sound, the semitones of which will be found to lie between the 3d and 4th, and between the 7th and 8th degrees, ascending from the basis. In rendering this succession of sounds available for musical purposes, by our artificial method of notation, the sounds have, so to speak, been fixed at a certain recognized pitch. Any of the sounds of the natural scale may be taken as a note to form the basis of a new scale, observing always the due succession of the tones and semitones. The note forming the basis is denominated the **Key-note** of the scale, and such scale is said to be in the **key** of that note. As in our notation, each whole tone can be artificially divided into two semitones (see **CHROMATIC**, in **Music**), it follows that, with the already existing diatonic semitones, there are 12 equal semitones between a key-note and its octave; and as each of these semitones may be taken as a new key-note, there are therefore 12 keys major, and the same number minor, all differing in pitch. In written notation, the scale of the note named C has been assumed as the natural key; the notes forming that scale being held to fall naturally into the requisite succession of tones and semitones. It follows that if any other note be taken as a key-note, one, or more, or all, of the notes of the so-called natural scale must be altered, by being either sharpened or flattened, to bring the scale of the new key into the due succession of tones and semitones. Such alteration is indicated by the marks of sharps, or flats, placed at the beginning of the staff, and is termed the *Signature* of the key. In the minor mode, the key of A minor stands exactly in the same relation to the other minor keys as the key of C does to the other major keys, A being the key-note on which the natural minor scale is found. All other keys have sharps or flats, in greater or less number, as they

KEY ISLANDS—KEYS.

are distant from the natural key of C major or A minor, reckoning by perfect fifths, ascending or descending; thus, the key of G major, which is a perfect fifth above C, has one sharp for its signature—viz., F sharp; the key of D, which is two fifths above C, has two sharps—viz., F sharp and C sharp; and so on to the key of F sharp, adding a sharp for every ascending fifth. The keys with flats are found exactly in the reverse order—viz., by descending fifths—thus, the key of F, a perfect fifth below C, has one flat—viz., B flat; the key of B flat has two flats—viz., B flat and E flat; and so on to the key of G flat with six flats, which in practice is regarded as the same as the key of F sharp with six sharps. The number of flats or sharps is in some cases, for a harmonical purpose, extended still further; such as the key of C sharp with seven sharps, which is the same as D flat with five flats; or the key of G sharp with eight sharps, which is the same as A flat with four flats. The unnecessary increasing of either sharps or flats only increases the difficulty of reading the music. The term key is often loosely used in the sense of *mode*, and we frequently hear of the major or minor *key*. Much confusion has arisen from this.

KEY ISLANDS: group s. of New Guinea, between 5° 12'—6° 4' s. lat., and 132° 40'—133° 18' e. long. They consist of Great Key, Little Key, Key Watela, and a number of small islands. In 1853, two new islets appeared in connection with earthquakes which occurred Nov. 26.

KEYS, n. plu. *kēz* [OF. *cayes*; Sp. *cayo*, a rock, a sand-bank, an islet in the sea: Icel. *ey*, an island: W. *cae*, an inclosure: L. *cautēs*, a rough pointed rock (see QUAY)]: small shoals or uninhabited islets (see CAICOS). **HOUSE OF KEYS**, the local parliament of the Isle of Man (q.v.).

KEYS, POWER OF THE (*Potestas Clavium*): term variously applied in different systems of the church. It properly signifies the supreme authority in the church. Rom. Catholics believe this to be vested in the pope, as successor of St. Peter. The phrase is derived from the metaphor addressed by our Lord to Peter, Matt. xvi. 19, and which Rom. Cath. interpreters, relying on the analogous use of the phrase, Is. xxii. 22, iii. 7, and i. 18, also in classical writers, understand as investing Peter with the supreme power in the church. The power of the keys is divided by Rom. Catholics into two branches—that of order, which, though possessed by all bishops and priests, is believed to belong specially and primarily to the pope; and of jurisdiction, which regards chiefly the supreme government of the church, and embraces the power of enacting laws and dispensing in them, and of directing and governing not only the Christian flock, but also its pastors in their several spheres. This jurisdiction of the keys is exercised in a more limited field, and in a subordinate way by patriarchs, primates, archbishops, bishops, and other dignitaries; but that, according to the Roman theory, it has its source, as well as its chief seat, in the pope, is implied in the distinctive use of the emblem of the keys as a symbol of papal

KEY WEST—KHAFALOUN.

jurisdiction. The metaphor of the keys was frequently appealed to in the debates of the late Vatican Council on the papal privileges. The phrase is applied also to the sacrament of penance, to designate the power of remitting or retaining sin, and with the same distinction of order and jurisdiction, of which the former is imparted to every priest by his ordination, while the latter is communicated only by an express act of the bishop or other superior.

Protestants differ somewhat in their views regarding the power of the keys as equally intrusted to the whole ministry of the church of Christ, and as including *doctrine* and *discipline*. They admit the argument from the use of the key in Scripture as a symbol of authority; but (referring sometimes to Matt. xvi. 23) refuse to acknowledge any limitation of that authority to the apostle Peter. The majority of them regard it as equally intrusted to the whole ministry of the church of Christ, and as including both *doctrine* and *discipline*. A view more simple and direct than this is taken by some who compare the passage cognate to that above quoted (Matt. xviii. 17-20, especially 17 and 20, which declare the power of the whole company of disciples rather than the power of the ministry or of any ecclesiasticism), and who thence infer that this power is for remission of sins and is granted by Christ to each individual believer exactly according to his faith, while the power naturally finds its most signal development in the apostles and the ministry appointed through them.

KEY WEST (sp. *Cayo Hueso*, Bone Reef): coral island, most westerly of the Florida Keys; belonging to Monroe co., Fla., 60 m. s.w. of Cape Sable, about 7 m. long, 1 to 2 m. wide, and nowhere more than 15 ft. above sea-level. There are no fresh springs: the water supply is from rain and distillation. The people, chiefly of Cuban and Bahaman stock, speak a Spanish patois.

KEY WEST: city of Florida, and a naval station of the United States; on the island of Key West. It has gardens of tropical fruits, and an artificial salt lake of 350 acres. There are extensive fortifications, a good harbor, two light-houses and a light-ship, several churches, a marine hospital and barracks. The city, the largest in the state, is beautiful, with ornamental cottages and gardens, and is inhabited by army and naval officers, traders, wreckers, divers, and invalids, whom the healthful climate attracts from the north. The exports are salt, turtle, and sponges; but the frequent wrecks among these islands afford the most profitable business, which employs 50 vessels, manned chiefly by Conchs, or natives of the Bahama Islands, and their descendants. Cigar making is a leading industry; about 25,000,000 cigars are made yearly. The climate is delightful, the temperature being from 50° to 90° F., with perpetual breezes, but there are also violent hurricanes. Pop. (1870) 5,016; (1880) 9,890.

KHAFALOUN, *ká-fá-lón'*, or **KHAPALU**, *ká-pá-ló'*: town of Western or Little Tibet, in the territory of Gholab Singh; on the Shayook, a short distance above its junction with the Indus, 110 m. n.e. of Serinagur. Pop. 12,000.

KHAKI—KHARTOUM.

KHAKI, n. *kā'kē* [various Hindu languages]: in *Brahmanism*, a sect of Vishnuvites, founded by Kil, a disciple of Krishna Das; so called because they apply the ashes of cow-dung to their dress and person.

KHAMSIN: see **KAMSIN**.

KHAN, n. *kawn* or *kān* [Turkish word, prob. of same origin as king (q.v.)]: title of Turkish and Tartar governors; applied to kings, princes, or chiefs. **KHANATE**, district or jurisdiction of a khan. **KHAGAN** (rare), 'khan of khans,' chief of khans.

KHAN: n. *kān* [Pers. *khan*, a house or tent]: an eastern inn or caravansary.

KHANDESH': see **CANDEISH**.

KHANI'A: see **CANEA**.

KHANPUR': city of the Doab: see **CAWNPORE**.

KHANPUR, *chān-pōr'*: flourishing commercial town of n. w. Hindustan, on a canal which connects it with the Indus, 400 m. west of Delhi; lat. 30° 9' n., long. 71° 16' e. It was formerly of much greater importance than now, though it still has considerable trade. Pop. estimated 10,000.

KHARASM': see **KHIVA**.

KHAR'GEH: see **EL-KHARGEH**.

KHARKOV, *chār-kōv'*: government in Little Russia, immediately e. of the government of Poltava; 20,959 sq. m. The surface is flat, with chalk hills along the streams. The soil is a rich and fertile loam, watered chiefly by affluents of the Don. In the n.w., the principal occupations are agriculture and distilling corn-brandy; in the s.e., the breeding of cattle and sheep. The breeding of horses also is carried on. Corn, tobacco, wax, honey, and tallow, are largely produced; beet-root sugar is manufactured, and there is an extensive trade in sheep and cattle; but as there is almost no communication with the surrounding governments, the resources of K. are in great part undeveloped. Pop. (1880) 2,027,165.

KHARKOV': capital of the govt. of the same name in European Russia, on the banks of affluents of the Donetz, 916 m. s.s.e. of Petersburg. It ranks as one of the chief towns of the Ukraine. Its position favors its enormous exchange trade between north and south; there are four annual fairs, and extensive manufactures of linen, felt, sugar, candles, soap, spirits, tobacco, and iron. K. has a university with 900 students, a veterinary college, and a model farm. Pop. (1880) 102,000.

KHARTOUM, *chār-tōm'*, (or *Khartum*): capital and emporium of the Egyptian Sudan (see **SUDAN**), on the peninsula at the junction of the Blue and the White Nile. The town consists mainly of mud-huts, but has many substantial buildings, including the governor's palace, mosque, and hospital. It lies mainly along the Blue Nile, here about

KHASI HILLS—KHERSON.

1,450 ft. above sea-level. The country around is bare and level. K. is the centre of the great caravan roads of the interior, and has been notorious for its slave-trade. Its Soudan trade is stated at \$65,000,000 annually. It became important under Mehemed Ali (q.v.) 1838; had a Rom. Cath. mission 1846, and a British consulate 1849-64. K. has a melancholy interest since its heroic defense by Gen. Gordon against the forces of the Mahdi 1884-5. Two days before the rescuing army reached it, K. fell, and Gordon was among the slain, 1885, Jan. 26: see GORDON, CHARLES GEORGE. Pop. variously estimated 25,000 to 50,000.

KHASI HILLS: range in Assam, on the Burmese frontier, interesting as having the heaviest known rainfall in the world: see RAIN.

KHATMANDU, *kât-mân-dô'*: seat of govt. in Nepaul-lat. 27° 42' n., long. 85° 18' e. It has narrow and dirty streets, and generally mean houses. The architectural pretensions of the town are confined to its temples, some of them of brick, and the others of wood. Pop. about 50,000.

KHAWASS, n. *kow-äs'* also spelled CAWASS [Hind.—from Ar.]: a functionary; a grandee; a minister of state.

KHAYA, *kā-ya'*: genus of trees of nat. ord. *Cedrelaceæ*. The KASSOU-KHAYE of Senegal (*K. Senegalensis*), one of the most abundant forest-trees in that part of Africa, attains a height of 80 or 100 ft., and is much valued for its timber, which is sometimes called *Cailcedra*, and is reddish colored, very hard, durable, and of beautiful grain. The bark is astringent and febrifuge, and contains a peculiar alkaloid.

KHAYYĀM, *kī-yām'*, OMAR, *ō'mar* (full name GHİYATH-UD-DEEN ABULFATH OMAR BIN IBRAHEEM AL KHAYYAMEE): about 1025-1123; b. Nishapoor, Persia: author and mathematician. He derived the epithet *Khayyām* (tent-maker), from his father's trade, was educated in the Nishapoor College, formed there a lasting friendship with Nizām-ul-Moolk, afterward grand vizier, and Hassan, subsequently founder of the sect of Assassins; applied himself to the special study of mathematics and astronomy, and published treatises on those subjects, and the *Rubaiyat* (his most notable work), a collection of 500 epigrams full of wit, mysticism, and philosophy. Of this an English translation has recently appeared. He has been called frequently the Voltaire of the East.

KHEDIVE, n. *kēd-ēv'* [Pers. *khidiv*, a sovereign]: title granted 1867 by the Sultan of Turkey to the Viceroy of Egypt, who exercises a kingly though tributary authority. **KHEDIVAL**, a. *kēd-ē'vāl*, of or pertaining to the Khedive of Egypt.

KHELAT, n. *kē-lāt'* or **KHELAUT**, n. *kē-lawt'*, or **KHILAUT**, n. *kē-lawt'* [Hind. and Arab. *khalat*, *khila*]: dress or robe conferred as a mark of distinction.

KHELAT' (geographical): see **KELAT**.

KHERSON, *kēr'son* or *chēr-sōn'*: government in s. Russia, on the borders of the Black Sea, appearing in history first B.C. 4th c., when it formed a portion of the kingdom of

KHERSON—KHIVA.

the **Bosporus**. From the 11th c., the right of possession was claimed by the Poles, the Cossacks, and various Tartar tribes, the last being ultimately successful. In the 17th c., Russians commenced to settle in the province; and during the next century, they were followed by a number of Serbians. The province, 28,666 sq. m., is uniformly fertile in the n. and n.w.; in the s. it is sometimes dry and arid, with here and there sandy wastes, which toward Odessa are incrustated with salt. Notwithstanding that three large rivers—the Dnieper, Bug, and Dniester—run through the s. of the province, the want of water is often severely felt, especially in July, when the vegetation is almost completely burned by the heat. The climate is very changeable, being very hot in summer, and piercingly cold in winter. Destructive ravages by locusts are frequent. The inhabitants are Little Russians (natives of the Ukraine), Moldavians, Bulgarians, Greeks, Germans, and Jews, employed chiefly in agriculture. The Germans cultivate tobacco, and rear silk-worms. Much of the arable land, however, is unproductive through want both of capital and labor. Cattle and sheep breeding are largely carried on. Pop. (1880) 1,765,302.

KHERSON', or **CHERSON**: capital of the govt. of K., in European Russia; on the right bank of the Dnieper, near where it widens into the estuary of the Liman, 808 m. s. by w. from Moscow. It was built by Catharine II. 1778, as a port for the construction of ships of war; but, in a very few years, was supplanted by Odessa and Nikolaief, both as a dock-yard and a commercial outlet. Only ships of light draught are now built at K., and only such ships can navigate the estuary. K. is the centre of the coasting and staple trade in timber and other goods floated down the Dnieper and its tributaries, and in Crimean salt. Rope-making, tallow-melting, and wool washing, are chief branches of trade, and the products are largely exported. K. has a gymnasium, naval school, school for training pilots, and an observatory. Pop. (1880) 128,079.

KHIDMUTGAR, n. *kīt' mūt-gār'* [Ar.—from *kidmat*, service; *gar*, a doer or agent]: in *India*, a table manservant, often contracted into **KIT**.

KHIVA, *chē'vâ* (anc. *Chorasmia*), or **KHAUREZM'**, or **KHARASM**, or **URGUNGE**: a khanate of Turkestan in central Asia; between lat. 37° 45'–44° 30' n., and long. 50° 15'–63° e.; about 25,000 sq. m.; the surface being mostly a sandy desert, with many scattered fertile tracts. It is bounded n. by the Russian territory and Sea of Aral, e. by the khanate of Bokhara, s. by Persia, w. by the Caspian Sea. The chief oasis, in which the cap. Khiva, is situated, stretches from the mouth of the Oxus or Amu-Daria for 200 m. along its banks, and is watered by artificial canals supplied from that river, to which entirely it owes its fertility. The inhabited area is about 5,000 sq. m. Pop. estimated, 260,000 settled inhabitants and nearly as many nomads. Among them are Uzbeks, Karakalpaks, and Turkomans (all Mongolian), and Aryan Tajiks, probably the original inhab-

KHLISTIE—KHODAVENDIGHIAR.

itants of K., and Kizilbashs, mostly liberated Persian slaves.

K., in ancient times, was nominally subject to the Seleucidæ; subsequently it formed a part of the kingdoms of Bactria, Parthia, Persia, and the Caliphate, and became an independent monarchy 1092 under a Seljuk dynasty. The Khivans, or, as they were then called, the Khaurezmians, after conquering the whole of Persia and Afghanistan, succumbed to the Moguls, under Genghis Khan, 1221. In 1370 K. came into the hands of Timûr. Timûr's descendants were subdued 1511 by Shahy Beg (called Sheibani Khan by western writers), chief of the Uzbeks, a Turkish tribe, and his successors have ruled over K. to our times. Ever since the Russians entered central Asia, they have complained that the Khivans fostered rebellion among their Kirghis subjects, and plundered their caravans. In 1717 Peter the Great endeavored to conquer K., but was defeated, and 1839 the attempt was renewed by the Czar Nicholas with no better success. War may be said to have recommenced when new Russian forts were founded 1869 and 71 on the shores of the Caspian. It was not, however, till 1873 that a great effort was made finally to crush Khiva. To diminish the difficulties of crossing the deserts, the Russian force was divided into five columns, each about 3,000 strong, to approach K. by different routes. After enduring with admirable fortitude great privations and fatigue, the Russians entered K. June 19. The khan agreed to pay a war indemnity and to cede to Bokhara the Khivan possessions on the right bank of the Amu-Daria (Oxus). Shortly afterward, however, these possessions were incorporated with Russian territory, and now Kizil-Kum and the annexed part of K. form the Russian gov. of Amu-Daria, 39,820 sq. m.; estimated pop. 109,600.—KHIVA, cap. of the khanate, is in the great oasis. It consists almost entirely of earth-huts, not excepting the residence of the khan; the only brick buildings being three mosques, a school, and a caravansary. Pop. of town about 20,000. See Burnaby's *A Ride to Khiva*.

KHLISTIE, *klis' tî*, or DANIELITES, *dân'î-êl-îts*: Russian sect founded 1645 by Daniel Philoppon, a Kostroma peasant, who deserted the army, proclaimed himself God, formulated 12 commandments, and began teaching his fanatical doctrines, while inculcating the observance of a part of the ceremonies of the church for policy's sake. They regarded Philoppon as the manifestation of God in the flesh, ridiculed the orthodox church, its ceremonies and priests, adored pictures of their god and saints, and concluded their services with a long meal. They attained large numbers, including many of the nobility, and in their practices to-day are somewhat similar to the Flagellants.

KHODAVENDIGHIAR. *chô-dâ-vên-dê-gyâr'*: province of Anatolia, in Asiatic Turkey, bordering (s.) on the Sea of Marmora, traversed by lofty mountains, including the ancient Mount Olympus, and comprising portions of the ancient Bithynia, Mysia, and Phrygia; cap. Brusa, It has

KHODJAS—KHONSAR.

a fertile soil, is well watered, and produces grain, wool, cotton, silk, and numerous fruits. Pop. 1,100,000.

KHODJAS, n. [Pers. *khavadjē*, a singer or reader]: in *Turkey*, professors or teachers who instruct the softas, or law and theological students, in the medresses, or secondary schools, attached to the mosques. When a softa passes a successful examination, which entitles him to the title of Khodja, he generally devotes himself for some years to teaching. After this he stands a second examination, and, if he pass it, obtains the title of Ulema or Doctor in Theology.

KHOI, *chōy*: town of n. Persia, province of Azerbaijan, on the Kotoura, a feeder of the Araxes, 50 m. n.w. of Tabriz, about 20 m. n. of Lake Urumeyah. Pop. 30,000.

KHOJEND, *chō-jēnd*: town of Russian Turkestan, on the Sir-Daria, the ancient Jaxartes, about 90 m. n.w. of Khokan. It is the seat of some cotton manufactures, and of considerable transport trade. Pop. estimated 45,000.

KHOKAN, *chō-kān*' (originally *Kokand*): formerly a khanate of Turkestan extending e. of 64° long. over the whole of the upper basin of the Jaxartes or Sir-Daria. But long previous to the commercial treaty in 1868 between Russia and K., the khanate had been confined to an area of about 30,000 sq. m. between 70° and 74½° e. long. and between 39° 40' and 42° n. lat. In the summer of 1875 a rebellion against the khan, who was already practically a Russian vassal, led to a Russian intervention. After a fierce struggle, the immediate result was the annexation to Russia of all the territory of K., n. of the Sir-Daria. Now the whole khanate forms the Russian govt. of Ferghana, a name under which K. was famous throughout the East in the middle ages. The area of Ferghana is 28,160 sq. m., and the pop., Kipchaks, Kirghiz, Tajiks, Sarts, and Uzbeks, is estimated 960,000. K. was far from being the richest or most fertile of the three independent khanates. There are manufactures of silks and coarse cottons. The town of Khokan, 220 m. from Samarcand, has about 75,000 inhabitants; but now the cap. of the province of Ferghana is Marghilan. Samarkand (q.v.) and Andijan also are in the province.

KHOLMOGORY, *chōl-mo-gō'rī*: town in the govt. of Archangel, European Russia; of great note when the White Sea trade was thriving. Since the seat of government has been removed to Archangel, K. has steadily declined. Peter the Great, on his return from his travels, brought to K. several specimens of the Dutch breed of cattle, by means of which the natives so improved their own, that the K. breed is now considered the best in Russia. Pop. (1880) 1158.

KHONSAR, *chōn-sār*': town of Persia, province of Irak-Ajemi, 80 m. n.w. of Isaphan, on the route from that city to Hamadan. Orchards abound here, and the raising of fruit, with weaving, are chief employments of the people. Pop. about 12,000.

KHOR—KHOSRU I.

KHOR, n. *kôr*: an Arab name for a deep secluded inlet of the Red Sea: see FIORD, or FJORD.

KHORASSAN, *chō-rās-sân'* (anc. *Parthia*, *Margiana*, and *Aria*): largest province of Persia; lat. 31°–38° 30' n., long. 53°–62° 30' e.; about 210,000 sq. m. of which nearly one-third is a vast salt waste; of the remainder, a large portion consists of plains of shifting sand; and the rest is fertile. The fertile districts are in the north, where the high range of the Elburz crosses the province, throwing out spurs, forming a mountainous district, abounding with fertile and well-watered valleys. Artificial fertilization by canals was extensive in ancient times, but the incessant disturbances, which have unsettled the district for the last 1,000 years, have almost put an end to this practice. The chief products of K. are grain, cotton, silk, hemp, tobacco, aromatic and medicinal plants, fruits, wine, salt, gold, silver, and precious stones, also camels, horses, and asses. In the more thickly-peopled districts are considerable manufactures of silk, woolen, and camels' and goats' hair fabrics, also of muskets and sword-blades. The chief towns are Meshed, the cap. Nishapûr, Yezd, and Astrabad. The inhabitants are Mohammedans of the Shiah sect.

K., in ancient times, included also the desert of Khiva or Kharasm, and the district now known as the kingdom of Herat, but the first was separated from it by the Seljuks at the commencement of the 11th c., and the latter about 1510, since which period it has been on several occasions seized and held for a short time by the Persians.

K. has been several times separated from the Persian empire, but was finally re-united to it at the commencement of the 16th c. by Ismail Sofi, the first Suffavean shah of Persia. See PERSIA.

KHORASSAN', THE VEILED PROPHET OF: see HAKIM BEN ALLAH.

KHORSABAD': see NINEVEH.

KHOSRÛ, *chôs-rô'*, or KHÛSRÛ, *chôs-rô'*, I., surnamed NÛSHÎRVAN (the noble soul), known in Byzantine history as CHOSROES I.: greatest monarch of the Sassanian dynasty, son of Kobad, King of Persia; began his reign on his father's death 531. He gave shelter to great numbers of those whom Justinian, the Byzantine emperor, persecuted for their religious opinions. In 540 he commenced a war of 20 years' duration with the Roman emperor; but though the Persians gained abundant glory, the other results were unimportant. On the accession of Justin II., the Persian ambassadors having been ignominiously abused, and the Greeks having taken possession of Armenia, K., justly indignant, again declared war 570, took Dara, the eastern bulwark of the empire, but was terribly defeated at Melitene (577) by Justinian, grand-nephew of the emperor Justinian; this defeat was, however, counterbalanced by the victorious Greek being in his turn totally routed in Armenia. K. did not live to see the end of the contest, as he died 579. His government, though very despotic, and occasionally oppressive, was yet marked by

KHOSRŪ II.—KHYBER PASS.

a firmness and energy rarely seen among the orientals. Agriculture, commerce, and science were greatly encouraged, ravaged provinces were repopled from his conquests, and wasted cities rebuilt. His memory was long cherished by the Persians, and many a story of the stern justice of K. is still current among them. Persia, during his reign, stretched from the Red Sea to the Indus, and from the Arabian Sea far into central Asia.—(For a full account of this prince, see Sir John Malcolm's *History of Persia*.)

KHOSRŪ II., surnamed PURVÎZ (the Generous): d. 628, Feb. 28: grandson of Khosrū I.; raised to the throne 590, but being immediately deposed by another claimant, was, by the assistance of Emperor Maurice, reinstated, and in gratitude surrendered Dara, Nisibis, and a great part of Armenia, to the Romans. In spite, too, of numerous and just grounds of quarrel, he preserved peace with that nation till the murder of his benefactor by Phocas. K. then invaded Mesopotamia 604, took Dara, and during 17 years inflicted upon the Byzantine empire a series of disasters, the like of which they had never before experienced. Syria was conquered 611; Palestine, 614; Egypt and Asia Minor, 616; and Chalcedon, the last bulwark of the capital, fell soon afterward. At this crisis, the fortune of war changed sides (see HERACLIUS). K., driven in turn to the very gates of Ctesiphon, was deposed and murdered by his eldest son, Shiroueh, or Siroes. It was to this prince that Mohammed sent a letter demanding a recognition of his mission: see MOHAMMED.

KHOTAN, *chō-tân'*, or ILLITZI: district of c. Turkestan, at the n. base of the Kuen-Lun Mountains. It is one of the four provinces of Kashgaria, formerly Chinese Turkestan. The district has fertile pastures, and is rich in gold and other metals. The people are mostly Uzbek Tartars.

KHOTYN': see CHOTYN.

KHURJA, *kôr'jâ*: town of British India, district of Boolundshuhur, the principal place of the pergunnah of the same name, 54 m. s. of Meerut, about two m. w. of the Ganges canal. Pop. (1881) 27,190.

KHUZISTAN, *chō-zis-tân'* (anc. *Susiana*): province of Persia, having Fars and the Persian Gulf on the south; divided into two almost equal portions—one, n.e., very hilly, the other, s.w., so level as to be almost a stagnant sea in the rainy season, and an arid waste in summer. K. contains extensive pastoral districts, on which vast herds of cattle are reared, and abounds in soil fitted for rice, maize, cotton, sugar-cane, indigo.

KHYBER PASS, *kī'ber*: most practicable of all the openings, four in number, through the Khyber Mountains, and the only one by which cannon can be conveyed between the plain of Peshawur, on the right bank of the Upper Indus, and the plain of Jelalabad, in n. Afghanistan. It is 30 m. in length, being here and there merely a

KHYERPUR—KIANG-SI

narrow ravine, between almost perpendicular rocks at least 600 ft. in height. It may be said to have been the key of the adjacent regions in either direction from the days of Alexander the Great to the Afghan wars of 1839-42, during which wars it was twice forced by a British army, in spite of an obstinate defense by the natives. The first fighting in the Afghan war of 1878-80 was in forcing an entrance into this pass, over which, as was stipulated in the treaty of Gandamak, the Anglo-Indian authorities were to have full control.

KHYERPUR, *kī ēr-pōr'*: town of Sinde, about 15 m. e. of the Indus. The town was formerly the residence of the northern ameer of the country, but is now little better than a collection of filthy mud-hovels. Pop. about 15,000.

KI, *kē*: Chinese word signifying a grand division of time; applied to the 10 periods of 3,000 years each, which are assigned as preceding the earliest imperial dynasty B. C. 2205.

KIABOUCCA, or KIABOOCA, or KYABUCA, *kī a-bó'ka*, or AMBOYNA WOOD, *ām-boy'na wūd*: a beautifully mottled wood, found in small pieces in timber yards; evidently the wens or excrescences formed on the stem of the producing tree, *Pterospermum Indicum* (nat. ord. *Byttneriaceæ*). The color of this wood is yellowish red, of different shades, and covered with a most elegant mottled figure in darker shades. It is much used for small ornamental articles, especially snuff-boxes, its scarcity and the small size of the pieces preventing its manufacture into larger articles.

KIAH'TA, or KIACHTA, *kē ách'tá*: town in Siberia, 150 m. s. of Lake Baikal, and close to the Chinese frontier, being separated only by a piece of neutral-ground, 280 yards broad from the Chinese town of Maïmatchin. Pop. (with Ust-Kiahta, some miles north) 10,000. Through this town began the intercourse between Russia and China, which had been arranged by the treaties of 1689 and 1727. Since the middle of last century, a lively and profitable barter-trade has been carried on both in K. and in Maïmatchin; but it was not till the end of the century that the Russians were able to produce on their side any articles besides furs, but since then, cloth and cotton goods, first of English or French, later of Russian manufacture, have in part been substituted. Formerly, the export to China of coins and the precious metals was forbidden at K., but this restriction is now partly removed. The exports from China consist chiefly of tea, of which about 100,000 cwts. finds its way into Russia by this road. This tea is very dear, on account of the enormous distance of its transport to K. (more than 3,000 m.), and the heavy Russian import duty. But the K. tea is the first crop, superior to all other that reaches Europe. Since 1860, commercial intercourse, formerly permitted only at K., extends to all the Russo-Chinese frontier. The annual fairs of K. have declined.

KIANG-SI, *kē-áng-sē'*: province of China; lat. 24°—30° n., long. 113° 20'—118° 30' e.; 72,176 sq. m.; bounded by

KIANG-SU—KICKAPOOS.

Hoo-Nan, Hoo-Pe, Ngan-Hoei, Che-Kiang, Fo-Kien, and Quang-Tong; cap. Nan-Chang. It is watered by the Kan-Kiang river and its numerous tributaries, has a generally mountainous surface, produces gold, iron, tin, lead, hemp, and green and black teas, and manufactures excellent porcelain and grass (nankeen) cloth. A large part of K. was flooded by a rising of the Yang-tse-Kiang river 1870-1. Pop. 23,046,999.

KIANG-SU, *kē-áng-só'*: province of China; lat. 30°-35° n., long. 116°-122° e.; 44,500 sq. m.; bounded by the Yellow Sea and the provinces of Shan-Toong, Ho-Nan, Ngan-Hoei, and Che-Kiang; cap. Nan-King. It is one of the most populous and fertile provinces of China, raises and exports more silk than any other province, is well watered by lakes, rivers, and canals, contains a number of important towns, and beside silk exports large quantities of rice, cereals, cotton, and tea. Pop. 37,843,500.

KIBBLE, n. *kīb'l*: in *mining*, a large iron bucket in which ore is drawn to the surface.

KIBE, n. *kīb* [W. *cīb*, a vessel, a husk: comp. Gael. *copan*, a cup, a boss, a dimple]: in *OE.*, a chap or crack in the skin occasioned by cold. KIBED, a. *kibd*, cracked or chapped in the skin by cold, having chilblains. KIBY, a. *kībī*, sore; chapped.

KIBITKA, n. *kīb'it-ka* or *kī-bit'ka* [Rus.]: a Russian vehicle of various sizes, which may be either completely covered, entirely open, or provided with a hood behind. It is a wheeled vehicle, but in snowy weather is mounted on runners. K. is also a tent used by the nomad tribes of the Kirghiz Tartars.

KIBLING, n. *kīb'ling* [etym. doubtful]: parts of a small fish used by fishermen on the coast of Newfoundland as bait.

KICK, n. *kīk* [Bav. *kickern*, a word used to represent an abrupt sound as a shout, cough, the cluck of a hen, etc.: prov. F. *giguer*, to throw about the legs: W. *cicio*; Gael. *ceig*, to kick]: a blow with the foot: V. to strike with the foot; to thrust out the foot with violence; to show opposition. KICK'ING, imp.: N. the act of jerking out the foot with violence. KICKED, pp. *kikt*. KICK'ER, n. one who kicks. KICK AGAINST THE PRICKS, Acts xxvi. 14, in allusion to an ox in the East kicking against the goad, and so causing it to pierce deeper. KICK THE BUCKET, in *slang*, to die—in allusion to the bucket or beam kicked from under a criminal who is hanged.

KICKAPOOS, *kīk-a-póz'*: a tribe of American Indians of the Algonquin family, formerly living on the Wisconsin river, now occupying reservations in n.e. Kansas and in Indian Territory. They were found first by French missionaries near the close of the 17th c., migrated to Illinois early in the 18th c., were found by the English on the Wabash river, 1763, were engaged in hostilities against the whites 1765, and 91, signed a treaty 1795, and after their battle at Tippecanoe 1811, and Fort Harrison 1812, signed

KICKLE—KIDD.

new treaties, and removed to the Osage river. They cared little for agricultural employment or education, roved through the Chickasaw and Creek countries, made frequent raids into Texas and Mexico, and ultimately separated into three parties, one settling at Santa Rosa, Mex., and the others in Kansas and Indian Territory. In 1885 they numbered 243 in Kansas, and 418 in Indian Territory.

KICKLE, a.: see KITTLE.

KICKSHAW, n. *kik'shaw* [F. *quelquechose*, something, an unsubstantial nicety in cookery—hence an unsubstantial gratification of another kind]: something fantastical or uncommon; a fantastical dish; a delicacy.

KICKSY-WICKSY, n. *kik'si-wik'si* [doubtfully referred to *kicking* and *winking*]: an OE. word of indefinite application, but generally implying 'restlessness'; a wife in a depreciatory sense; a fancy woman; an unruly jade: ADJ. restless; uncertain.

KID, n. *kid* [Icel. and Dan. *kid*, a young goat: Ger. *kitze*, a female cat, a goat]: a young goat: V. to bring forth a young goat. KID'DING, imp. KID'DED, pp. KID'LING, n. *-ling*, a little kid.

KID, v. *kid* [AS. *cydan*, to make known]: in OE., to make known; to discover. KID'DING, imp. KID'DED, pp.

KID, n. *kid* [W. *cidys*, fagots]: in OE., a brush-fagot; a basket for carrying wares to market, so named as made of twigs. KIDDER, n. *kid'di-er*, a packman or travelling huckster.

KID, n.: in *naut.*, small wooden tub or vessel, in which sailors receive their food.

KIDD, *kid*, WILLIAM; known as ROBERT KIDD: d. 1701, May 24; b. Scotland: navigator. He was the son of a non-conformist minister, became a sailor at an early age, distinguished himself for nautical skill and bravery, and for services rendered the American colonies was voted a purse of £150, by the council of New York 1691. In 1695 a stock company was organized which bought and equipped in London, the *Adventure*, a 30-gun galley of 287 tons, and placed it under command of K., who was authorized to do all in his power to suppress piracy and harass the French. He recruited part of his crew in England and the remainder in New York, and 1696, Sep. 6, with a crew of 154 men, sailed from the Hudson river on his mission, backed by the royal seal. He went at once to the coast of Madagascar, a favorite rendezvous of pirates. In 1698 rumors began to be circulated in America and England that instead of punishing the pirates he had affiliated with and become the chief among them; and in Nov., official orders for his arrest were sent to the govs. of all the English colonies. Early in 1699 he returned to New York with a large amount of treasure, some of which he buried on Gardiner's or on Shelter Island, and was induced to go to Boston to answer the charge of piracy. He went there July 1, defended himself against the charges of piracy, murder, arson, and

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other crimes, and was sent by the council to London for further examination. The evidence was insufficient to convict him of piracy, but he was condemned to be hanged for the murder of one of his men, though he claimed justification in the sailor's mutinous conduct. Both the fairness of his trial and the truth of the other charges against him have since been questioned. There has long been a popular belief that much of his buried treasure is still hidden on the shores of Long Island Sound, and at various times much labor and money have been spent in searching for it.

KIDDERMINSTER, *kíd'ér-mín-stér*: manufacturing town and municipal and parliamentary borough of England, county of Worcester; on the Stour, four m. above its junction with the Severn, 18 m. s.w. of Birmingham. The parish church is a handsome edifice, partly in the decorated and partly in the perpendicular style. K. is noteworthy chiefly for carpet manufactures. Richard Baxter was a minister here. Pop. (1871) 20,814; (1881) 25,634.

KIDDLE, n. *kíd'l* [F. *quideau*, a wicker engine for catching fish: Bret. *kidel*, a net at the mouth of a river fastened to two stakes]: a kind of basket set in the opening of a weir or embankment in a river for catching fish; sometimes spelled **KITTLE**, or **KETTLE**—hence the proverb, 'A pretty *kittle*, or *kettle* of fish,' used ironically it means, 'a fine mess.'

KIDDOO, *kíd'dó*, **JOSEPH B.**: 1840–1880, Aug. 19; b. Penn.: soldier. He enlisted as a private in the 2d Penn. vols. 1861, Apr., was soon promoted maj. 101st Penn. vols., was appointed maj. 6th U. S. colored troops 1863, Oct., col. 22d U. S. colored troops 1864, June, was brevetted brig.gen. and maj.gen. U. S. vols. and col. and brig.gen. U. S. A., became lieut.col. 43d U. S. inf. 1866, July 28, and was retired on account of wounds with the full rank of brig.gen. U. S. A., 1870, Dec. 15.

KIDNAP, v. *kíd'náp* [from familiar slang *kid*, a child: Lith. *kudikis*, a child, and slang or prov. Eng. *nap*, or *nab*, to steal: Dan. *nappe*, to snatch: Sw. *nappa*, to catch]: to steal a human being—man, woman, or child; to seize and forcibly carry away. **KID'NAPING**, or **KIDNAPPING**, imp. **KID'NAPED**, or **KIDNAPPED**, pp. *-nápt*: **ADJ.** carried off forcibly, as a child. **KID'NAPER**, or **KIDNAPPER**, n. *-ér*, one who steals men, women, or children.—*Kidnapping* is not a legal term, but is frequently applied in popular language to the offense of stealing or forcibly carrying off a child or adult. It is an aggravated kind of **ABDUCTION** (q.v.).

KIDNEY—KIDNEY-BEAN.

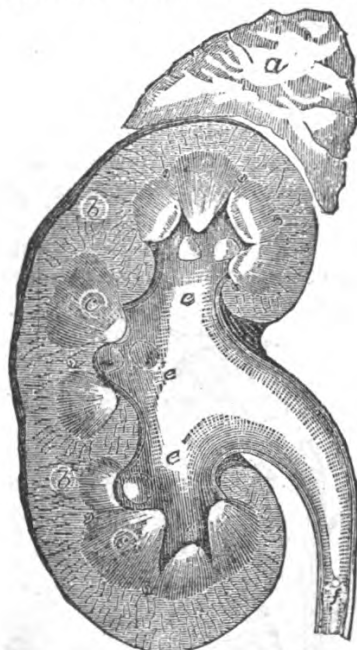
KIDNEY, n. *kīd'nī*, **KID'NEYS**, n. plu. *-nīz* [AS. *quidh*; Icel. *kvidr*, the womb, and Eng. *nigh*: OE. *nere*; Ger. *niere*, the testicles, the kidneys: Icel. *nyra*, a kidney—*lit.*, the testicles of the body: Latham suggests L. *catēnā*, a chain—from the linked appearance of a bullock's kidney]: one of two oblong flattened bodies lying behind the intestines of an animal which secrete the urine (see **KIDNEYS**, THE). **KIDNEY-SHAPED**, having the form or shape of a kidney. **KIDNEY-ORE**, a variety of iron ore. **KIDNEY**, disposition or habits, as 'a man of my *kidney*.' **OF THE SAME KIDNEY**, of the same tribe or set; of the same size or kind.

KID'NEY-BEAN (*Phaseolus*): genus of plants of nat. ord. *Leguminosæ*, sub-ord. *Papilionaceæ*; having 9 stamens united by the filaments, and one separate stamen, a downy stigma, a 2-lipped calyx, and the keel of the corolla with the stamens and style spirally twisted. The species are mostly annual herbaceous plants, natives of warm parts of the e. and w. hemispheres. The Common K. (*P. vulgaris*) is the *Haricot* of the French. In Britain, it is sometimes called *French Bean*. In s. Europe, and as far n. as Germany, in the United States, and many other countries the K. is a field-crop, and the ripe seeds are an important article of food. Within the tropics, it is sown at all seasons; but in countries subject to frost, only in spring, after the danger of frost is past. The seeds are used for food in a boiled state. In Britain, they are not regularly ripened, except in the most favorable situations in the south. The plant is therefore cultivated chiefly for the sake of the unripe pods, which, when boiled with the young seeds in them, form a well-known and very delicate dish.—The **SCARLET RUNNER** (*P. multiflorus*) has often been regarded as merely a larger variety of the K., with long twining stem. It is doubtful, however, if they are originally from the same native country; an American origin being assigned to the Runner, which is also a perennial—though in the climate of Britain usually destroyed by the winter's frost, and therefore treated as an annual—and has tuberous roots. The roots; in common with those of some other species of *Phaseolus*, are narcotic and dangerous; serious consequences have ensued from the accidental eating of them. The plant is cultivated for the same uses as the K., and affords even in Scotland, a very abundant crop of green pods in the latter part of autumn, though the seed is not sown till about May 1. It is a very ornamental plant, particularly the common variety with scarlet flowers. It readily covers any trellis or paling; and requires stakes of 6—10 ft. in height—Closely allied to the K., if indeed more than varieties, and cultivated for the same uses, are the *Haricot de Soissons* (*P. compressus*), the *Haricot Princesse* (*P. tumidus*), etc. In some parts of India, one of the most esteemed kinds of pulse is the **MOOG**, or **MOONG**, or **MUNGO** (*P. Mungo*); in others, the **KALA MOOG**, or **BLACK GRAM** (*P. Max*).

KIDNEYS.

KIDNEYS, THE: two glands in the bodies of men and other animals; having for their office the secretion of the urine. That this function is of extreme importance, is shown by the facts that when in consequence of disease, it is altogether suspended in the human subject, even for a day or two, death frequently occurs, and that urinary glands corresponding in function to our kidneys are found, not only in all vertebrate animals, but in almost all mollusks, in the arachnidans, in insects, and in myriapods.

The human kidneys are in the region of the loins, on each side of the spine, and are imbedded in a layer of fatty tissue. The average length of each kidney is a little more than four inches, and its usual weight is from four to six



Vertical Section of the Kidney.

(From Gray's *Anatomy*.)

a, supra-renal capsule; *bb*, cortical substance of kidney; *cc*, medullary substance of kidney; *eee*, the sinus or pelvis; *f*, the ureter, proceeding to the bladder.

ounces. The substance of the kidneys is dense, extremely fragile, and of a deep red color. On making a vertical section of the kidney, it is seen to consist of two different substances, named, from their position, the external or cortical, and the internal or medullary substance.

The *cortical substance* forms by far the greater part of the gland, and sends numerous prolongations inward between the pyramids of the medullary substance. It is soft, granular, and contains numerous minute red globular bodies diffused throughout it, called, from their discoverer, the Malpighian bodies, and which are noticed below more fully. Its substance is made up of the *uriniferous tubes* (described in the notice of the medullary portion), capillaries, lymphatics, and nerves, held together by an intermediate parenchymatous substance.

KIDNEYS.

The *medullary substance* consists of pale-reddish, conical masses, called the pyramids of Malpighi. They are usually about 12 in number, but vary from 8 to 18, and their apices (the *papillæ*) point toward the hollow space (termed the *sinus* or *pelvis*) which occupies the interior of the gland. The medullary structure is firmer than the cortical, and instead of being granular, presents a striated appearance, from its being composed of minute diverging tubes (the uriniferous tubes, or tubes of Bellini), which run in straight lines through this portion of the kidneys, after having run in a highly convoluted course through the cortical portion.

The cavity occupying the interior of the kidneys (the *sinus* or *pelvis*) is lined by mucous membrane, which, through the medium of the ureter, is continuous with that of the bladder, and which extends into the tissue of the kidneys, to line the uriniferous tubes. The mucous membrane forms a cup-like cavity around the termination of each pyramid, and the cavity, termed the *calyx*, receives the urine from the open terminations of the tubes, and conveys it toward the pelvis, whence it passes down the ureter into the bladder.

Each kidney is supplied with blood by a renal artery, a large trunk which comes off at right angles to the aorta.



Plan of the Renal Circulation in Man and the Mammalia:

a, terminal branch of the artery, giving the terminal twig, *af*, to the Malpighian tuft, *m*, from which emerges the efferent vessel, *ef*. Other efferent vessels, *e, e, e*, are seen proceeding from other tufts, and entering the capillaries surrounding the uriniferous tube, *t*. From this plexus of capillaries the emulgent vein, *ev*, springs.

The blood, after the separation of the various matters which constitute the urine (q.v.), is returned into the venous system by the renal or emulgent vein, which opens into the inferior vena cava.

The nerves are derived from the renal plexus, which is formed by filaments of the solar plexus and the lesser splanchnic nerve. They belong entirely to the ganglionic or sympathetic system.

The Malpighian bodies are found in all vertebrate animals. In mammals, which are the only animals in which there is a division into a cortical and a medullary portion, these bodies are found only in the vertebrates. In an in-

KIDNEYS.

jected specimen, they appear to the naked eye as mere colored spots. They are for the most part of a spherical, oval, or flask-like form. Their diameter in man may range from $\frac{1}{80}$ to $\frac{1}{14}$ of an inch, the mean being $\frac{1}{104}$. A small artery, termed the *afferent vessel*, may be traced into each Malpighian body, while a minute venous radicle, the *efferent vessel*, emerges from it close to the point at which the artery had entered. The Malpighian body itself consists of a rounded bunch or tuft of capillaries, derived from the afferent, and terminating in the efferent vessel, and inclosed in a clear and transparent capsule, lined at its lower part with epithelium, continuous with that of the uriniferous tube, which springs from each capsule.

The convoluted portion of the tube which proceeds from, and is continuous with, the Malpighian capsule, is composed of a delicate basement membrane, in immediate relation externally with an abundant capillary net-work, and lined in its interior by the spheroidal or glandular variety of epithelium. The diameter of its central canal is about $\frac{1}{1000}$ of an inch. The straight portion of the tubes of which the pyramids are composed is lined with epithelium, which approaches more nearly to the scaly or tessellated variety, and which seems to serve as a protecting layer, rather than to take part in the function of secretion. The tubes unite with one another to a great degree as they pass through the structure of the pyramids, so that at the base of a pyramid there may be many thousand tubes, while the number of openings at the extremity of a papilla are comparatively few.

It remains to consider the respective functions of these two essential elements of the kidney (as it exists in the vertebrate animals), viz., the Malpighian bodies and the tubes. From the admirable researches of Mr. Bowman (*Philosophical Transactions*, 1842), and from the labors of subsequent anatomists, it appears that in animals in which the urinary excretion is passed in an almost solid form (as in birds and reptiles), the tufts are small and simple as compared with those in the kidneys of animals which (like man and most mammals) pass the urinary constituents dissolved in a large quantity of water. On these grounds, as well as from the fact that the anatomical arrangement of the tufts is calculated to favor the escape of water from the blood, Mr. Bowman arrives at the conclusion that the function of the Malpighian bodies is to furnish the fluid portion (the water) of the urine. The arrangement of the convoluted portion of the tubes, with a capillary net-work on one side of their basement membrane, and secreting epithelial cells on the other, is the exact counterpart of the arrangement in other secreting glands, and there can be no doubt that the functions of the cells in the convoluted portion of the tubes is to separate from the blood the various organic constituents (urea, uric acid, creatinine, etc.) and inorganic salts (chloride of sodium and phosphate of soda, etc.), which collectively form the solid constituents of the urine. It does not necessarily follow that these secreting cells undergo rapid decay and renewal; it

KIDNEYS.

is more probable that they have the power of selecting certain materials from the blood, and of transmitting them, without the disintegration of their own structure, to the interior of the tube.

For the physical and chemical characters of the secretion yielded by the kidneys, see URINE.

DISEASES OF THE KIDNEYS.—The most important affection of the kidneys is *Bright's Disease* (q.v.). On examining the kidneys, in a case of death from this disease, it is found that there is great increase in the size and number of the oil-globules which exist in small quantities in the epithelial cells of the healthy gland. The urinary tubes becoming thus gorged and distended, compress the capillary vessels on their exterior; and hence, in consequence of passive congestion of the Malpighian vessels, which gives rise to obstruction of the circulation, the serum of the blood exudes in place of pure water, and becomes mixed with the urine, which thus becomes albuminous in this disease. *Inflammation of the Kidneys*, or *Nephritis*, is not uncommon. In acute inflammation, there is a deep-seated pain in the small of the back, on one or upon both sides, often extending downward toward the inside of the thigh. This pain is increased by pressure, sudden change of position, coughing, etc. The urine is scanty, high-colored, albuminous, or bloody, and often deposits pus and sedimentary matter on standing. There is more or less fever, preceded by rigors; nausea and vomiting are frequent, and the bowels are usually constipated. In chronic inflammation, most of the above symptoms are present, but in milder form, and there is little or no fever. In both the acute and chronic form, the blood may become contaminated, as in *Bright's Disease* (q.v.) from the want of due purification by the kidneys, and various secondary affections may arise.

The causes of inflammation of the kidney are various. It may be due to mechanical violence, exposure to cold and wet, and to the ingestion of substances which have the property of irritating the kidneys, as cantharides, oil of turpentine, etc. A gouty diathesis and the presence of concretions also may be noticed as causes. Any affection capable of producing retention of urine, may, by distending the pelvis of the kidney, occasion inflammation, as, e.g., stricture of the urethra and affections of the spinal cord producing paralysis of the urinary organs.

The treatment must, on the whole, be antiphlogistic (or lowering) in the early stage of the disease, but must be considerably modified in accordance with the origin of the trouble.

Nephralgia, or *Pain in the Kidney without Inflammation*, which usually but not invariably depends on the passage of a concretion through the ureter, is one of the most painful affections to which the human frame is subject. It usually comes on when the concretion makes its way from the pelvis of the kidney into the ureter, and does not cease till it has passed into the bladder. During an ordinary fit of gravel (see CALCULUS), or even in apparent health, a severe

KIDNEY-VETCH.

pain is suddenly felt in the loins, extending to the groin, thigh, or abdomen, and sometimes simulating colic. The pain comes on in paroxysms, with intervening periods of comparative ease. The paroxysm is usually accompanied by vomiting, a small and feeble pulse, and a profuse sweat. There is a frequent desire to pass urine, but the effort is usually futile. At length, usually after some hours, or even one or two days, the concretion escapes into the bladder, and the pain suddenly ceases.

This affection may be readily distinguished from inflammation by the sudden access and paroxysmal character of the pain and by the absence of fever.

As the disease is one which is very liable to return, the patient should know what steps to take before advice can be obtained. Opium is the sheet-anchor in this affection. The patient (assuming that he is an adult) may take two grains of opium, or an equivalent dose (35 or 40 minims) of laudanum or solution of muriate of morphia, when the attack comes on, and may repeat the medicine in half-doses every hour or two hours, until the pain is somewhat alleviated, or signs of the narcotic influence of the drug begin to manifest themselves. Should the stomach be so irritable as to reject the medicine, a drachm of laudanum in a little thin starch may be injected into the rectum. Hot fomentations to the abdomen and loins also give partial relief. Chloroform may be inhaled with great benefit during the paroxysms, but only under the superintendence of a physician.

Suppression of Urine, or *Ischuria renalis*, is an affection in which there is either a complete cessation of the secreting action of the kidney, or so considerable a diminution as to be clearly morbid. It is undoubtedly, in most cases, a mere symptom of some other disease, but occasionally no other disorder is obvious, and it must be regarded as an independent or idiopathic affection. If no urine be separated from the blood, coma (intense stupefaction) and death rapidly supervene from the retention of urea (or of carbonate of ammonia, into which it readily breaks up) in the blood, which thus becomes impure, and acts as a poison on the brain. The treatment, which is seldom successful, is too purely professional for notice in these pages.

For further information on diseases of the kidneys and allied affections, see BRIGHT'S DISEASE: DIABETES: DROPSY: CALCULUS.

KID'NEY-VETCH (*Anthyllis*): genus of plants of nat. ord. *Leguminosæ*, sub-ord. *Papilionaceæ*; containing a number of species, some shrubby, some herbaceous, natives chiefly of the warmer temperate parts of the e. hemisphere. They have the petals nearly equal in length, and an oval 1-3-seeded pod, inclosed in the permanent inflated and generally downy calyx. The British species, the Common K. (*A. vulneraria*), also called *Lady's Fingers*, is a herbaceous perennial with pinnated unequal leaves, and crowded heads of yellow (or sometimes scarlet) flowers. It grows on very dry soils, and is eaten with avidity by cattle, but does not yield much produce.

KIDO—KIEKIE.

KIDO, TAKAYOSHI: about 1833–1881, June; b. province of Choshin, Japan: statesman. He joined the revolutionary party in his province 1868, was instrumental in organizing the 'reform' army, and became a member of the privy council under the new govt. In 1872 he visited Europe and America as a member of the imperial embassy, was recalled before the work of the embassy was completed and raised to the rank of Sangi (state councilor), and afterward held an important office in the imperial household.

KID'RON: see **KEDRON**.

KIEFF, *kē-ěf'*, or **KIEV**, *kē-ěv'*: government in Little Russia, immediately n. of the govt. of Kherson; bounded n.e. by the river Dnieper; 19,546 sq. m., more than one-half arable, and one-fifth under wood. In the n. portions, the surface is flat and marshy; the south is covered with ranges of hills, branches of the Carpathian Mountains, running n.w. and s.e. The chief river is the Dnieper, with its tributaries, the Pripet and the Teterev. The soil, chiefly loam, and partly clay and sand, is very fertile; so that, though agriculture is backward, the returns are considerable. The climate is exceedingly mild; everything is in blossom in April, and frosts do not set in till November. Agriculture and horticulture are chief occupations of the inhabitants. Wheat is extensively exported to Odessa. There are numerous distilleries, and beet-root sugar, tobacco, cloth, china, and delft are manufactured. Pop. (1880) 2,530,204.

KIEFF, or **KIEV**: chief town of the govt. of K.; on the w. bank of the Dnieper; one of the oldest of Russian towns, and formerly the capital. In 864, it was taken from the Khazars by two Norman chiefs, companions of Ruric, and conquered from them by Oleg, Ruric's successor, who made it his capital. In 1240 (when it ceased to be the capital), it was nearly destroyed by Batû, Khan of Kiptchak. Christianity was proclaimed in Russia first at K. 988. In the 14th c., it was seized by Gedimin, Grand Duke of Lithuania, and annexed to Poland 1569, but 1686 was restored to Russia. K. is strongly fortified, has a remarkable suspension-bridge over the Dnieper, one of the best universities in Russia, a military and an ecclesiastical school. In its neighborhood is the convent of Kievo-Petchersk, a celebrated Russian sanctuary which annually attracts thousands of pilgrims from the most remote corners of the empire. K. is not an industrial, but a commercial centre; large fairs take place here annually, the most celebrated of which is during the winter. The Jewish quarter of K. was burned during the anti-Jewish riots 1881. The trade is chiefly with Odessa, Poltava, and Austria. The K. of the present time is one of the largest towns in the empire: pop. (1877) 127,251, one-third being Poles.

KIEKIE, *kē'kē* (*Freycinetia Banksii*): shrub of nat. ord. *Pandanaceæ*, yielding an edible, aggregated fruit, said to be the finest indigenous fruit of New Zealand. The species of this genus are tropical Asiatic, or Polynesian climbing

KIEL—KIEPERT.

shrubs, with sheathing, long, rather grassy leaves, usually spinous or serrated on the margin; and terminal, solitary, or clustered spadices of unisexual flowers. The K. is found in the n. part of New Zealand. It climbs the loftiest trees, branching copiously. The leaves are two or three feet long. The spadices are clustered.—The fruit is a mass of fleshy berries. The jelly made of it tastes like preserved strawberries.

KIEL, *kēl*: capital city of the Prussian province of Slesvig-Holstein, on a deep fjord or bay of the Baltic, which admits large ships to anchor close to the town; the station of the greatest portion of the German navy. The commerce of K. has increased very rapidly since it became a naval station; numerous naval courts, establishments, and schools are quartered here. K. is the seat of the court of appeal for the province. The university, with 250 to 300 students, has a library of about 150,000 vols.: in connection with it are a hospital, observatory, botanic garden, natural history museum, and a good collection of northern antiquities. There are numerous schools and benevolent institutions. The most ancient of its five churches is St. Nicholai, which dates from the 13th c. The castle has a good sculpture-gallery, containing, among other copies of the best works of art, casts of the Elgin marbles, and of Thorwaldsen's best productions. The public gardens and the wooded shores of the fjord, with the woods of Düsternbrook, afford numerous pleasant walks. K., which became a member of the Hanseatic League in the 14th c., was formerly the chief mart for the farm and dairy produce of the Danish islands; and the very ancient annual fair, held for four weeks after Epiphany, was attended by buyers from every part of the duchies. K. has manufactures of tobacco, oil-colors, sugar, machinery, ironmongery, etc. Butter is extensively exported. It is an important link in the line of communication between Germany and the Baltic islands and ports; and steam-packets daily convey passengers and mails to and from the ports of the Baltic and North Sea. Pop. (1864) 20,738; (1880) 43,594.

KIELCE, *kē-ělt' sã* or *kyělt' sã*: govt. in Russia, in Poland on the frontier of Austria; 3,623 sq. m. It has sugar factories and iron, lead, and coal-mines of importance; and in the 16th c. had valuable copper-mines, but these are not now worked. Its agricultural products are grain and fruits. The Vistula river divides it from Galicia. Chief town *Kielce*, 50 m. n.e. of Cracow; pop. (1873) 7,838. Pop. of govt. 470,300.

KIEN-CHOW', or KUNGCHOW': see HAINAN.

KIEPERT, *kē'pěrt*, HEINRICH: geographer: b. Berlin, 1818, July 31. After studying geography with Ritter, he spent 1841-2 exploring Asia Minor, was director of Weimar Geographical Institute 1845-52, became a prof. in the Univ. of Berlin 1859, and was made a member of the Acad. of Sciences and of the statistical bureau 1865. He has published several noted geographical and historico-geographical works. His maps are held in high repute.

KIESERITE—KILDARE.

KIESERITE, n. *kis'er-it* [Ger. *kies*, gravel, quartz]: a mineral composed of magnesian sulphate and chloride, and water.

KIEV': see **KIEFF**.

KIJ'ARI: see **KEDJERI**.

KIKIN'DA, or **NAGY-KIKINDA**, *nödj kè-kèn'döh*, or **GROSS-KIKIN'DA**: town of the Austrian Empire, in the Temeser Banat, 134 m. s.e. from Pesth, in a level fertile country. Pop. (1880) 19,845.

KIL, n. *kil* [Celt.—from L. *cella*, a cell]: a common element in Celtic place-names, and signifying church, cell, or burying-place, as Kilkenny, Columbkil, etc.

KILAUEA, *kè-low-ä'a*: great volcano of Hawaii: see **SANDWICH ISLANDS**.

KILDA, *kil'da*, St.: small island off the w. coast of Scotland; lat. 57° 49' 20" n.; 50 m. w. of the peninsula of Harris, to the parish of which it is reckoned as belonging. It presents bold and lofty precipices to the sea, except at two points, one on the s.e., the other on the w. side of the island. At each of these points there is a bay with a low shore. Besides the main island there are several small islets, and the whole group has an area of 3,000 to 4,000 sq. acres. Pop. (1881) 77. Situated in the midst of the Gulf Stream, St. K. has a mild temperature, though the weather is often boisterous. On the main island and its islets are nearly 2,000 sheep, among which is a Spanish breed, whose wool is highly prized. Immense numbers of wild-fowl are killed annually, the flesh of which is generally eaten and the feathers sold. The sea abounds in delicious fish, easily caught from the rocky shore without boats. The principal exports are kelt or rough woolen cloth, blankets, feathers, fulmar-oil, salted ling, young cattle, cheese, and tallow. See Seton's *St. Kilda*, 1877.

KILDARE, *kil-där'*: inland county of the province of Leinster, Ireland, having its border about 14 m. w. from the English Channel. Its greatest length n. to s. is 40 m.; e. to w. 27 m.; 418,497 acres, of which 356,787 are arable. Its surface is almost one unvaried plain, with the exception of the s.e. border, which meets the range of Dublin Hills, and the s. border which, is slightly elevated. Its principal rivers are the Liffey and the Barrow, the latter in part its boundary. The Boyne has its source in K., as has also the Blackwater. It is traversed by the Grand and Royal canals. The most remarkable features of K. are the celebrated plain called the 'Curragh of Kildare'—an undulating down, six m. long, and two broad, the site of the well-known race-course, the Newmarket of Ireland—and the Bog of Allen. The solitary hill called Allen, which rises in the great central limestone plain, is a mass of granular compact greenstone and porphyry, with some red sandstone conglomerate quarried for millstones. The soil is generally a rich loam, resting on limestone or slate. The total extent of land under tillage (1853) was 140,837 acres; but the proportion of pasture land to tillage has been much

KILDARE—KILIAN.

increased, the acres under crop (1879) being only 120,953. The principal towns are Naas, Athy, and Kildare; but the number of minor towns is beyond the average of Irish counties. K. sends two county members to the imperial parliament. In antiquities of all historical periods, K. is peculiarly rich. In the time of Geraldus Cambrensis, the plain of the Curragh had a stone circle similar to that of Stonehenge; it is now a military camp. There are five round towers and some stone crosses still preserved, and many castles of the Anglo-Norman period, three still inhabited. The well-known Rom. Cath. college of Maynooth (q.v.) is in this county, also the Jesuit college of Clongowes Wood. Pop. (1871) 83,614; (1881) 75,804, of which 66,184 Roman Cath., 8,616 Episcopalians.

KILDARE (Hib. *Kill-dara*, Church of the Oaks): ancient episcopal and market town in county K., Ireland, 25 m. s.w. of Dublin. It owed its origin to a monastery, founded, according to the annalists, in the end of the 5th c., by St. Bridget, an Irish chieftain's daughter, who received the veil from St. Patrick himself. Around the monastery, a town of some importance sprang up, which with the abbey was repeatedly plundered by the Danes. After the English invasion, it rose to importance, and a parliament was held in it 1309. In the wars of Elizabeth, and subsequently in the Great Civil War, it suffered almost complete ruin, from which it but partially recovered. At present, it is much decayed, and is decreasing. The see of K., together with that of Glendalough, in the Prot. Church, is united to that of Dublin. In the Rom. Cath. the united sees of Kildare and Leighlin form a distinct diocese. Notwithstanding its present decayed condition, K. is exceedingly interesting for its antiquities, which comprise the ruined cathedral, a Franciscan and a Carmelite abbey, a portion of the chapel of St. Bridget, popularly called 'The Firehouse,' from a perpetual fire anciently maintained there, and, above all, the round tower, 130 ft. in height, which crowns the elevation on which the town is built, and is seen from a great distance. Pop. (1851) 1,298; (1871) 1,333; (1881) 1,171, mostly Rom. Catholics.

KILDERKIN, n. *kil'dér-kín* [O.Dut. *kindeken*, a little child, a measure of varying size]: a small barrel containing 18 gallons.

KILERG, n. *kil'èrg* [Gr. *chilioi*, a thousand]: in *physics*, a thousand ergs: see **ELECTRICAL UNITS**.

KILHAM, ALEXANDER: see **METHODISTS, NEW CONNECTION**.

KILIA, *kē'li-á*: town in the portion of Bessarabia ceded by Roumania to Russia 1878; on the left bank of the K. branch of the Danube, 25 m. n.e. of Ismail. There is some commerce. Pop. 6,400.

KILIAN, *kil'i-an* or *ke'lē-án*, SAINT: Bishop of Würzburg in the 7th c., apostle of Franconia, saint of the Rom. Cath. Church. He was a native of Ireland, and a member of that distinguished body of Irish missionaries among the

KILIMA-NJARO—KILKENNY.

Teutonic nations, to whose labors, in the 6th and 7th c., Christianity and civilization were so largely indebted in s. and s.e. Europe. He was of noble family, and while young entered the monastic life in his native country. Having undertaken with several fellow-monks a pilgrimage to Rome, his journey through the still pagan province of Thuringia occasioned a desire to devote himself to its conversion; and being joined by his fellow-pilgrims, Colman and Donatus, he obtained for the project at Rome, 686, the sanction of the pope, Conon, by whom he was ordained bishop. On his return, he succeeded in converting the Duke Gosbert, with many of his subjects, and in opening the way for the complete conversion of Thuringia; but having provoked the enmity of Geilana, who, though the widow of Gosbert's brother, had been married to Gosbert, by declaring the marriage invalid, and inducing Gosbert to separate from her, he was murdered at her instigation, during the absence of Gosbert 789, with both his fellow-missionaries. The work which K. commenced was completed by Boniface and his fellow-missionaries.

KILIMA-NJARO, *kil-ē-mán-já-rō* (Great Mountain): enormous mountain mass in e. Africa, between Victoria Nyanza and the coast; $3^{\circ} 20'$ s. lat., and $37^{\circ} 50'$ e. long. It culminates in two magnificent peaks, Kibo and Kimawenzi, covered with perpetual snow, of which the chief is 18,715 ft. high—the highest known African mountain. It was discovered by Rebmann, and visited by Von der Decken; and in 1871 New ascended to its snow-line. In 1883, Thomson came to K. and went n. to Mount Kenia (close to the equator), which he affirms to equal K. in height. Both are extinct volcanoes. In 1884, Johnston headed a special expedition to Kilima-Njaro.

KILKENNY, *kil-kěn'ī*: inland county, province of Leinster, Ireland, bounded s. by Waterford; 46 m. in greatest length n. to s., and 24 in greatest width e. to w.; 796 sq. m., or 509,732 acres, of which 405,321 are arable. Pop. (1841) 189,312; (1851) 138,775; (1861) 110,341; (1871) 109,379; (1881) 99,531, of whom 93,699 were Rom. Cath. and 4,832 Episcopalians. There are more than 20,000 pupils at the national schools. The soil is generally fit for tillage. In 1881, the number of acres under crop was 159,304. The live-stock (1881) was—horses, 16,933; cattle, 120,594; sheep, 85,393; pigs, 39,777. The surface of the county is very varied, the s. portion being elevated, with hills rising to 1,696 ft. in the summit of Mt. Brandon. In the w. district are the Walsh Mountains. The principal rivers are the Nore, which traverses the whole length from n. to s.e., and falls into the Barrow; the Barrow, and Suir, which form the e. and s. boundary. The surface of K., except the mountains in the s., is mainly of limestone formation, overlaid in the n. districts by shale and sandstone. In the hilly districts is an extensive deposit of anthracite coal, but of inferior quality. In the neighborhood of the city of K., a valuable black marble, interspersed with fossil shells, is quarried, of which a considerable manufacture of chimney-

KILKENNY—KILL.

pieces and similar objects is carried on. Marl is found generally through the county. Capital, Kilkenny (q.v.). Towns of secondary importance are Callan, Thomastown, Freshford, Urlingford, and Castlecomer, centre of the coal-district. K. having been, from an early period after the invasion, the seat of the great Anglo-Norman families of Fitzgerald, Butler, Grace, Purcell, and others, has been the scene of much of the conflict of the English and Irish races, and is still thickly studded with remains of the military strongholds of the English settlers. The ecclesiastical remains are no less numerous; and it possesses five round towers, and a considerable number of raths or tumuli, cairns, stone-circles, and pillars. The most remarkable natural curiosity is the cave of Dunmore, between Castlecomer and Kilkenny, opening by a natural arch of 50 ft. in height, and containing several chambers incrustated with stalactites: it is traversed by a subterranean stream.

KILKEN'NY (Gael. 'Church of St. Kenny'): city in Ireland, cap. of the co. of K., and a co. of itself; on the river Nore, 73 m. from Dublin. Pop. (1881) city 12,299; parl. bor. 15,278—almost wholly Rom. Catholics. This city owes its origin to the cathedral diocese of Ossory, which dates from the 12th c. Almost from the time of the invasion, K. was a strong seat of the English power, its castle dating from the time of William, Earl of Pembroke, 1195. From an early date, K. was a place of much political importance, as well as the seat of numerous religious establishments. Being on the s. frontier of the Pale, it was strongly walled in the end of the 14th c., and several parliaments were held in it, the most notable 1367, in which was enacted the well-known 'Statute of Kilkenny,' the great nucleus of all the distinctively English legislation for Ireland. The cathedral dates in part from the 13th c., and the abbey church of St. John's, called the Black Abbey, has been partially restored, and is one of the very few ancient Irish churches now in actual occupation for Rom. Cath. religious use. A handsome Rom. Cath. cathedral has been recently completed. The so-called college or grammar-school of K. was founded by the Butlers in the 16th c., and was further endowed by the great Duke of Ormond. St. Kyran's College is a Rom. Cath. educational establishment, one of the first opened after the repeal of the law which made Rom. Cath. education penal. K. formerly possessed considerable manufactures of blankets and coarse woollen and linen cloths, but of late they have much declined. It is the seat of extensive marble-works, and has a large and active provision-trade, the chief outlet of which is Waterford, with which K. is connected both by river and by the Kilkenny and Waterford railway.

KILKEN'NY COAL: same as **ANTHRACITE** (q.v.)
COAL.

KILL, v. *kíl* [AS. *cwellan*, to kill; *cwelan*, to die: Dan. *quale*, to strangle: Ger. *qualm*, a suffocating fume: more directly Icel. *kolla*, to hit on the head—from *kollr*, top, head: Norw. *kylla*, to poll trees]: to deprive of life in any

KILLARNEY—KILLINGLY.

manner or by any means; to put to death; to still. **KILL'**-**ING**, imp.: **ADJ.** dangerous to life; heart-breaking; effective: **N.** the act of depriving of life. **KILLED**, pp. *kild*. **KILLER**, n. *-ér*, one who.—**SYN.** of 'kill': to murder; slay; assassinate; destroy; slaughter; butcher; deaden; calm; quell.

KILLARNEY, *kil-ár'ní*: small market-town of Ireland, co. Kerry, Munster, $1\frac{1}{2}$ m. from the Lower Lake of K., 17 m. s.e. of Tralee, 46 m. w.n.w. of Cork. It contains an imposing Rom. Cath. cathedral, a Dominican friary, and a nunnery, has little trade, is exceedingly dull in winter, though it wakes into animation in spring and summer, when it is visited by crowds of tourists, attracted by the beauty of the scenery in the vicinity. Pop. (1881) 6,651.

KILLARNEY, LAKES OF: series of three connected lakes, near the centre of co. Kerry, Ireland. The surplus waters are conveyed by the river Laune n.w. to Castlemain Harbor. The Upper Lake is $2\frac{1}{2}$ m. long and $\frac{1}{4}$ of a m. broad, and contains several islands. The Long Range river, leading to the Middle Lake, is about 3 m. in length. The Middle Lake is 2 m. long by 1 m. broad; and the Lower Lake, with about 30 islands, is 5 m. long by 3 broad. The beauty of the scenery, which is widely celebrated, consists in the gracefulness of the mountain outlines, the rich and varied coloring of the wooded shores, deepening through gray rock and light-green arbutus to brown mountain heath and dark firs.

KILLAS, n. *kíl'lás*: among the Cornish miners, clay-slate. **KILLINITE**, n. *kíl'in-ít*, a green-gray or yellowish mineral belonging to the felspar family.

KILLDEER, *kíl'dér*: bird of the plover family, named in imitation of its whistling cry. It is the *Charadrius vociferus* of Linnæus, ranked by modern ornithologists in the genus *Agialitis*. It is one of the finest and largest of the Ringed Plovers, is about the size of a snipe; sooty-brown above, bright buff on the tail-coverts, white bar on the expanded wings, mostly pure white beneath, but with two black bands on the breast. It is the most common plover in the United States, and is found in all parts, though less abundantly in the n. east. It ranges as far as 56° n. lat. in Canada. In winter it is found in the s. states, and as far s. as Central America and even Peru; in spring it spreads over the northern continent. It winters sometimes on the sea-coast of the n. states. It breeds on grass fields or newly-plowed lands, and shows extraordinary solicitude for its offspring on approach of an intruder.—See **PLOVER**.

KILLIECRANKIE, BATTLE OF, *kíl-í-kräng'kí*: see **GRAHAM, JOHN (VISCOUNT DUNDEE)**.

KILLINGLY, *kíl'ing-lí*: village and tp. in Windham co., Conn.; on the New York and New England railroad; 5 m. s. of Putnam, 28 m. n. by e. of Norwich. The village contains a church accommodating the surrounding region, and the tp. comprises the village of Danielsonville also, and several important manufactories. Pop. tp. (1880) 6,921.

KILLINGTON PEAK—KILN.

KILLINGTON PEAK: noted landmark in Sherburne tp., Rutland co., Vt.; 9 m. e. of Rutland. It is the third highest summit of the Vt. mountains, is accessible without much difficulty or unusual fatigue, and from its elevation of 4,180 ft. commands a beautiful and extended panorama.

KILLOW, n. *kil'wō*: an earth of a blackish or deep-blue color; probably another name for *killas*.

KILMAINE, *kil-mān'*, CHARLES JENNINGS: about 1750-1799, Dec. 15; b. Dublin: soldier. In 1765 he entered the French army, and after serving with Lafayette in the American revolutionary war, was commissioned brig.gen. 1792. He greatly distinguished himself in the Vendean and Italian campaigns, and so high was his reputation as a soldier that when the French army was organized for the proposed invasion of England, he was appointed its commander-in-chief.

KILMAINHAM HOSPITAL: establishment near Dublin for the reception of wounded and pensioned soldiers; founded by King Charles II.; conducted on similar principles to the sister institution, Chelsea Hospital (q.v.). K. H. is maintained by an annual parliamentary grant, and provides for 250 veterans and officers. The general commanding the forces in Ireland is *ex-officio* the master of K. H., and has his residence on the estate. Near it is the govt. prison of Kilmainham.

KILMARNOCK, *kil-mār'nok*: largest town in the co. of Ayr, Scotland, and one of the chief stations on the Glasgow and Southwestern railway; on the small stream of K., 12 m. n.n.e. of Ayr. K. was formerly celebrated for its manufacture of 'cowls'; and the 'Kilmarnock wabsters,' a notable class, have received from the satiric pen of Burns, a not altogether enviable immortality; but the introduction of machinery has reduced them to insignificance. Later, the town became one of the chief seats of calico-printing in Scotland; but though this manufacture continues, it has lost its importance. K. has several large engineering establishments, woolen-mills, carpet manufactories, tanneries, and breweries. It has also some endowed schools, numerous churches, and has recently acquired a public park. The country around is one of the richest in Scotland in coal and iron, and its dairy produce is extensive. The largest cheese-show in Scotland is held here, the value of the quantity exhibited generally amounting to about £35,000. A statue of Burns was recently erected here. Pop. (1871) 22,952; (1881) 24,978.

KILN, n. *kil* [W. *cylyn*; O.Sw. *kolna*, a kiln: Icel. *kylna*; Sw. *kolna*, a drying-house for corn: L. *cūtīna*, a kitchen]: large stove or oven in which articles are dried, hardened, or burnt; a pile of dried clay brick constructed for being hardened by fire. **KILN-DRY**, v. to dry in a kiln. **KILN-DRIED**, a. dried in a kiln. **BRICK-KILN**, a place or structure for hardening clay-bricks by fire.—*Kiln* designates several kinds of furnaces or ovens, of iron or brick, or of the material which is itself the subject of the operation. For

KILO—KILT.

Brick-kilns, see BRICK. An *intermittent kiln* is one in which the fire is not continued after the charge is burned; a *continuous kiln*, one in which the fire is kept in full force while the charge is removed and a fresh charge put in. A *furnace kiln* is for burning limestone, and may be from 10 to more than 30 ft. high.

KILO, *kē'lo*, or KILOGRAM, or KILOGRAMME, n. *kīl'ō-grām* [F.—from Gr. *chilioi*, a thousand, and F. *gramme*]: a French weight of 1,000 grammes, and equal to 2.2046 lb. avoirdupois: see GRAM: METRIC SYSTEM.

KILOGRAMME: see GRAM.

KIOLITRE, n. *kīl'ō-lē'tr* [F.—from Gr. *chilioi*, a thousand, and *litra*, a Gr. weight of twelve ounces]: a F. measure of 1,000 litres, equal to a little more than 220 gallons imperial; also to 35.3171 Eng. cubic ft.: see LITRE: METRIC SYSTEM.

KILOMETRE, n. *kīl'ō-mē'tr* [F.—from Gr. *chilioi*, a thousand, and *metron*, a measure]: a F. measure of 1,000 metres, equal to 1093.6389 Eng. yards: see METRE: METRIC SYSTEM.

KILOSTERE, n. *kīl'ō-stār'* [F.—from Gr. *chilioi*, a thousand, and *stērēōs*, solid]: a F. measure equal to 35317.41 Eng. cubic ft.: see STERE.

KILPATRICK, *kīl-pāt'rīk*, HUGH JUDSON: 1836, Jan. 14—1881, Dec. 4; b. near Deckertown, N. J.: soldier. He graduated at the U. S. Milit. Acad. 1861, entered the army as 2d lieut. of artillery 1861, May 6; was appointed capt. 5th N. Y. vols. May 9, received a wound at Big Bethel June 10, commissioned col. 2d N. Y. cav. 1862, Dec., was in the n. Va., Rappahannock, Md., and Penn. campaigns, and distinguished himself as a cavalry raider, promoted brig.gen. 1863, June 13; brevetted lieut.col. U.S.A. for gallantry at Gettysburg, was with Gen. Sherman in his western and Atlanta campaigns, promoted maj.gen. of vols. and brev.brig.gen. U.S.A. 1865, June, resigned his vol. commissions 1865, Dec.; was U. S. minister to Chili 1865-68, and 1881, Mar.-Dec., and died at his post. During his first mission to Chili he married the niece of a Rom. Cath. archbishop.

KILRUSH, *kīl-rūsh'*: small seaport of Ireland, in co. of Clare, on the n. shore of the estuary of the Shannon, 50 m. w. of Limerick. It is much resorted to for sea-bathing, has a good harbor, and considerable trade in corn, butter, pigs, fish, feathers, hides, flags, Irish moss, and in turf cut in the vicinity. Stone and slate are quarried, and there are manufactures of flannels, friezes, and linen-sheetings. Pop. (1881) 3,805.

KILSYTH, *kīl-sīth'*: burgh of barony in Stirlingshire, Scotland, about 12 m. n.e. from Glasgow, with which it is connected by railway. Here are several factories, and coal and iron works. Pop. (1871) 4,895; (1881) 5,405.

KILT, n. *kīlt* [Sw. *kylsa*, a bunch or cluster: O.Sw. *opkilta*; Dan. *kilte*, to kilt one's clothes, to truss or gather them up in a bunch. Gael. *ceilte*, concealed, covered—from

KILWA—KIMBERLEY.

ceil, to cover, to conceal]: a kind of short petticoat worn by men in the Highlands of Scotland, and by certain Highland regiments, called by the Highlanders a *filie-beag* = *philibeg*, the little fold, plait, or garment: V. to tuck or truss up as a petticoat or gown, etc., for convenience of walking; to form into plaits. KILT'ING, imp.: ADJ. forming into plaits, as a machine. KILT'ED, pp.: ADJ. dressed in a kilt.

KILWA, *kil'wa*, or QUILOA, *kē'wō-á*: island and town off the coast of Zanguebar, e. Africa, belonging to the Sultan of Zanzibar. The island is 6 m. long, contains a strong fort in which the sultan's gov. resides, and has a superior harbor between it and the mainland. The town is in lat. 8° 57' s., and has long been noted as one of the chief slave-exporting ports. Pop. 7,000.

KILWINNING, *kil-wín'ing*: town in co. Ayr, Scotland. It consists chiefly of one long, irregular street. Handloom weaving and hand-sewing or embroidery, formerly chief occupations of the people, now employ very few. The town now depends mainly on the numerous coal-pits in its vicinity, and on its proximity to the Eglinton Ironworks which alone afford employment to 1,700 miners and others. The parish church, built 1775, occupies part of the site of the famous Abbey of Kilwinning. The town was the birthplace of freemasonry in Scotland, and until the institution of the Grand Lodge 1736, all other lodges in Scotland received their charters from 'Mother Kilwinning:' even after 1736, till 1807, when the disputes between the two lodges were adjusted, many charters were issued by the mother-lodge. K. is noted for its archery, and is the only place in Scotland where shooting at the papingo is practiced. About a mile and a half s.e. of the town, in the midst of extensive and beautiful policies, stands Eglinton Castle, principal residence of the family of Montgomerie, Earls of Eglinton, and the scene of the renowned 'Tournament' 1839. Pop. of K. (1881) 3,469.

KIMBALL, *kim'bal*, HEBER CHASE: 1801, June 14—1868, June 22; b. Sheldon, Vt.: Mormon. He joined the Church of the Latter-Day Saints in Victor, N. Y., 1832; became an apostle 1835, was on missionary service in England 1837-8, with Brigham Young (q.v.) led the Mormons from Mo. to Nauvoo, Ill., made a second missionary voyage to England, left Nauvoo 1846, Feb. 17, and was one of the detachment that settled in Great Salt Lake valley 1847, July 24, and conducted the remainder of the Mormons to the new settlement 1847-8. He was chosen head priest of the order of Melchizedek 1846 and a counselor of the church 1847.

KIMBERLEY, *kim'bér-lī* (formerly NEW RUSH): mining town in the diamond region of s. Africa; in Griqualand West, e. of Orange river, 520 m. n.e. of Cape Town. It was settled 1872, and two years afterward nearly all its inhabitants left for the gold mines in Transvaal. Still it has elements of a probably permanent town—having churches, banks, a newspaper, and some solid business

KIMBO—KIN.

buildings. Pop. (1881) estimated 10,000, besides a floating native pop. of nearly equal number.

KIMBO, a. *kīm'bō* [see **AKIMBO**]: crooked; arched. **TO SET THE ARMS AKIMBO**, to place the hands on the hips, with the elbows projecting outwards.

KIM'BRI: see **CIMBRI**.

KIMCHI, *kīm'kē* (or **KIMHI**, *kīm'chē*), **DAVID** (generally quoted by his initials, *ReDaK*): most eminent Jewish grammarian and exegete: b. prob. Narbonne (where he spent most of his life) toward the end of the 12th c.; d. Provence about 1240; of a Jewish family which had fled from Arab fanaticism in Spain. His father, Joseph K., was author of a number of commentaries and other theological works. His brother Moses is renowned for works of a similar kind, especially a Hebrew Grammar, *Mahalach Shebile ha-Daat*, of which there are several editions. His own celebrity, however, far exceeds theirs. His Grammar, *Michlol*, and his Lexicon, *Shorashim*, have, to a certain degree, been the basis of all subsequent Hebrew grammars and lexicons. He wrote also commentaries on almost all the books of the Old Testament, most of which have been separately printed, and translated into Latin by Nelo, Pontaco, Leusden, Muis, Janvier, etc., besides several polemical works, such as the *Vikuach*, *Teshuboth le-Nozrim*, etc. He was made arbiter in the great Maimonides controversy (1232.)

KIM-COAL, n. *kīm-kōl'* [*kim*, contr. from *Kimmeridge*, a village of Dorsetshire, England]: provincial term for a highly bituminous shale. **KIMMERIDGE CLAY**, *kīm'er-ij klā*, in *geol.*, lowest series of the Upper Oolite, consisting of thick beds of blueish-gray, slaty clay, and in great part of a bituminous character, which sometimes forms an impure coal known as *kim-coal*. The series attains a maximum thickness of 500 or 600 feet. The fossils are chiefly mollusca, with a few placoid and ganoid fish, and several reptiles. In many places, layers of an oyster (*Ostrea deltoidea*), without any other organic remains, occur in broad continuous floors parallel to the stratification: the valves are usually together, and young specimens are occasionally attached to the older ones.

KIM-KAM, ad. *kīm-kām* [Gael. *cam*, crooked]: in *OE.*, a reduplication of *kam*, meaning crooked; awry; upside down; clean from the purpose. **CLEAN-KAM** is a corruption of the phrase **KIM-KAM**.

KIMPULUNG, *kēm'pō-lóng*: town of Walachia, 80 m. n.w. from Bucharest. Pop. (1880) 5,534.

KIN, n. *kīn* [AS. *cyn*; Goth. *kunī*; Icel. *kyn*, race, family: AS. *cennan*, to beget: Dut. *kunne*, sex: Gael. *cinn*, growth, increase: Gr. *genos*; L. *genus*; Skr. *ganas*, race, family (see **KIND**): relationship by blood; affinity; race: ADJ. of the same nature. **KINSFOLK**, n. *kīnz'fōk* [*kīn* and *fōk*]: relations; persons of the same family. **KINS'MAN**, n. *-mān*, a man of the same race or family. **KINS'WOMAN**, n. feminine.

KIN.

KIN, NEXT OF: blood-relatives of one deceased. When a person dies intestate, leaving personal property, such property devolves upon and belongs to the next of kin. The law declares a certain order of precedence among the next of kin, which is generally the same in England and the United States. The degrees of kindred are divided into lineal and collateral. The lineal consists of the ascending, such as father, mother, grandfather, grandmother, paternal and maternal, and so on *ad infinitum*; and the descending, such as son, daughter, grandson, granddaughter, and so on *ad infinitum*. The collateral kindred consists of brothers, sisters, uncles, aunts, and the children of such *ad infinitum*. The mode adopted from the civil law, for computing the propinquity of degree allows one degree for each person in the line of descent exclusively of him from whom the computation begins, and in the direct line counts the degrees from the deceased to his relative; but as regards collaterals, it counts the sum of the degrees from the deceased to the common ancestor, and from the common ancestor to the relatives. Thus, a brother is in the second degree, counting one to the father, and one from the father to the brother; a nephew, and also an uncle, a great-grandfather, and a great-grandson, all are in the third degree; a son and a father are in the first degree; and so on.

When a person dies intestate, leaving personal property, there are two classes of rights to which the next of kin are entitled: one is the right to administer the estate, or to take out letters of administration; the other is the right to a share of the property itself. As regards the right of administration, the widow or next of kin may be selected, both or either. But among the next of kin, those are to be preferred who are nearest in degree according to the above computation: thus, a son or father is preferred to a brother, grandfather, or grandson; and these to a nephew, uncle, great-grandson, or great-grandfather, and so on. As regards the more valuable right of a share in the property, the rule is, that if there is a widow surviving, and also issue of the deceased, who are in that case the next of kin, then two-thirds of the property go to the next of kin; if there are no issue, but a widow survives, then one-half only goes to the next of kin; but if there is no widow surviving, then the whole goes to the next of kin. But the next of kin take according to the statute of Distributions (see DISTRIBUTIONS, STATUTE of) which slightly differs from the order of the civil law as to the degrees of priority: thus, the children exclusively take the whole, if children survive; if some of the children are dead, leaving issue, then the issue collectively of each dead child take an equal share with the living children, by what is called the principle of Representation. If there are none nearer than grandchildren, all take an equal share, and the issue of a deceased grandchild also take one of such shares. After all the children and grandchildren are dead without issue, then the father, if alive, is entitled to the whole. If he also is dead, then the mother, the living brothers and sis-

KINA BALU—KINCARDINESHIRE.

ters (together with the issue of deceased brothers and sisters collectively), take each one share. After these are dead, then grandfathers and grandmothers, paternal and maternal, and nephews and nieces, if alive, take each a share. The right of representation, i.e., the right of the children of a deceased person being one of a class (and who, if alive, would have been one of the next of kin), to represent him, and take his share, applies as far as the children of brothers and sisters, but no further. In England, the heir-at-law, if of equal degree, is one of the next of kin, and takes his share with the rest, though he gets also all the real estate. The half-blood counts among the next of kin equally with the whole blood. See HEIRS: SUCCESSION.

In Scotland, the rules of priority among the next of kin vary considerably from the above order.

KINA BALU: interesting mountain in the n. angle of the island of Borneo, height 13,700 ft. It was twice ascended by Spencer St. John, F.R.G.S., author of *Life in the Forests of the Far East*.

KINBURN, *kin-börn'*: small fort of s. Russia, in the govt. of Kherson, at the extremity of a long narrow sand-bank, which forms the s. boundary of the estuary of the Dnieper. During the Crimean War, it fell before a naval expedition of the allies, 1855, Oct. 17. About a mile from the fort stands the little fishing-village of Kinburn.

KINCARDINESHIRE, *kīng-kār'dīn-shēr*, or THE MEARNs, *mārnz*: maritime county of Scotland, with Aberdeenshire and the Dee on the n., Forfarshire and the North Esk on the s. and w., and the North Sea on the east. The rocks are granite, gneiss, sand stone, conglomerate, mica-slate, clay-slate, limestone, and trap. Area, 248,284 acres, of which 120,050 are in cultivation, and 23,153 acres in wood. The county may be divided into five sections—viz., the Coast, Garvock; the 'How o' the Mearns,' the Grampians, and Deeside. The coast-land and much of the 'How' is of superior quality. The 'How' forms part of the Valley of Strathmore (q.v.). The Grampianst running across the county from e. to w. parallel to the Dee, with an average breadth of seven to eight m., cover about 80,000 acres. One of the peaks, Mount Battock, is 2,555 ft. high. The Deeside portion of the county is a comparatively narrow strip of light sharp soil. The rainfall is 23 to 27 inches. The produce of the county and the condition of the inhabitants have improved vastly since the middle of the 18th c., when there was little to be seen but poor huts and starved cattle, and when the value of the largest ox was not more than 20s. In 1881, K. had 577 acres of wheat, 12,120 acres barley and bere, 31,430 acres oats, 55 acres rye, 581 acres beans, 40 acres peas, 3,696 acres potatoes, 18,304 acres turnips. Of livestock, there were 4,798 horses, 25,013 cattle, 24,966 sheep, and 1,967 swine. There are few manufactures in the county. The principal towns and villages are Stonehaven (q.v.), the county town; Bervie, a royal burgh; Lawrence-

KINCHOW—KIND.

kirk, a borough of barony; and Johnshaven. In the beginning of the 19th c., about 1 in 50 of the population was on the poor-roll, the average expenditure for each being £1, 16s. Pauperism has since greatly declined. Of the objects of antiquarian interest, the most noted is Dunnotar Castle (q.v.). K. was the birthplace of George Wishart, Robert Barclay, Dr. J. Beattie, and Dr. Thomas Reid. Pop. (1871) 34,630; (1881) 34,460. Valued rent, 1879-80, £259,102.

KINCHOW, *kin'-chow'*: city of China, province of Hoo-pee, on the left bank of the Yang-tze-Kiang, lat. 30° 26' 40" n., long. 112° 8' e.; about 150 m. w. of Hankow. K. is surrounded by a strong wall, and is considered one of the keys of the empire. Pop. estimated 600,000.

KINCOB, n. *kin'kōb*, or KIN'CAUB, n. *-kawb* [an E. Indian word]: a fabric of muslin, gauze, or silk, variously woven, and embroidered with silver or gold.

KIND, n. *kīnd* [AS. *cynd*, nature; *cynde*, natural, native: Gael. *gīn*, to beget; *gīnte*, begotten: Dut. and Ger. *kind*, a child]: race; family; sort; produce; nature; character: ADJ. disposed to do good to others; indulgent; favorable; loving; natural. KIND'ED, a. in *OE.*, begotten; KIND'LESS, a. in *OE.*, unnatural. KIND'LY, ad. *-lī*, in a kind manner; with good-will; benevolently; fitly: ADJ. of the same nature; natural; fit; mild; benevolent. KIND'LI-NESS, n. *-lī-nēs*, favor; affection; good-will; natural disposition. KIND'NESS, n. *-nēs*, good-will; benevolence. KINDRED, n. *kin'drēd* [*kin*, and AS. *rædan*, condition: OE. *kinred*]: relationship by birth or marriage; affinity; relatives; in *OE.*, relation; want of correspondence or agreement: ADJ. of the like nature or properties; congenial; related. KIND-HEARTED, a. having much kindness of nature. KIND-HEARTEDNESS, n. benevolence. IN KIND, in produce, or in some commodity as distinguished from money. TO TAKE IT KIND, to consider it a favor. *Note.*—KIND, in the sense of nature; KINDLY, natural, etc., though the primary significations, are now mostly OE. We have in the Litany, 'the *kindly* fruits of the earth' = 'natural.'—SYN. of 'kind, n.': race; genus; style; manner; way;—of 'kind, a.': congenial; sympathetic; benevolent; benignant; gracious; obliging; benign; bounteous; beneficent; generous; propitious; compassionate; humane; tender; affectionate; good; lenient; clement; mild; gentle; amicable; friendly; bland; favorable;—of 'kindly, a.': congenial; kindred; proper; bland; softening; sympathetic; gracious; favorable.

KINDERGARTEN.

KINDERGARTEN, *kĭn'dér-gár-tĭn*: kind of school or training-place for young children—name and thing recently imported from Germany. The principle was first propounded and the system invented by Fröbel (1782–1852: see FROEBEL, FRIEDRICH WILHELM AUGUST). He was early impressed with the insufficiency of the teaching and training in the ordinary infant school, and with the fact that the loving instinct of the mother required, for the training of the child, thoughtful guidance and direction. He saw that the teaching in the infant school was to a large extent traditional; that the selection of subjects and exercises depended on fashion, or on the likings or prejudices of the teacher, and not on a genuine knowledge of the nature of the children; and that the whole procedure was based on an induction of facts and phenomena hastily made, and resting on no firm ground of principle. He therefore set to work to study the ways and doings of infants from their birth, and to note down systematically what kind of mental food and what kind of bodily activity Nature at each stage of their existence prompted them to prefer. He also reached the following principles: (a) That education means a harmonious development of all the bodily and mental powers; (b) that the *spontaneous* is the raw material and the only element that is valuable in education, and that the teacher must graft all his instruction upon the spontaneous activity of the child; (c) that the work of the teacher is not to give knowledge *ab extra*, but to supply material, means, and opportunities in a rational and harmonious order for the child's mind spontaneously to work upon; and (d) that in the presentation of their materials or occupations, there must be no break (*In Naturâ non datur saltus*), because all occupations which train must be developed out of each other. The early materials for instruction are called *gifts*, because they are presented to the child only when his nature and stage of development call for them. The province of the educator is to map out the world of early childhood, and to engineer—that is, to give each step in—the paths to knowledge or power in each subject; the province of the teacher is to apply this general knowledge to particular cases, and with loving care and delighted patience to provide the right mental food—the most suitable activities for each hour and stage of development. His complete aim is the systematic cultivation of all the powers in complete equilibrium. Hence, while the infant-school goes too much into work and drill, Fröbel's system calls for attention to the individual child; he weaves the work into 'play' (spontaneous activity), and he evolves 'drill' out of the free individual desire for society. Hence Fröbel's large use of song and dance. He respects freedom and the right order of development so much that he would not give a *word* to a child until a mental necessity and desire had been created by an ordered set of experiences for that word; and he cultivates the senses and the hand with the utmost care, so that perfectly accurate perception and comparison may produce true and clear

KINDLE—KINE.

conceptions, which again give rise to true and just judgments. 'All the byways to untruth,' says Miss Shirreff (*Kinder-Garten*, Chapman and Hall, 1876), 'such as exaggeration, confusedness of mind, inaccuracy of speech, are cut off.' The child is not *taught*, but *led* by a set of ordered experiences to the perception of the principles of number (*Arithmetic*) and of space (*Geometry*); and his senses and powers of hand and eye are cultivated by an elaborate series of exercises. The steps in Fröbel's system are: (1) *Spontaneity* or *Play*, which, however, in a child is always serious, and never frivolous; (2) direction of this toward external fact and truth; (3) weaving of spontaneous powers into ordinary occupations; (4) development into self-culture, independent action, a love of knowledge, beauty, and society. The process, like the process of Nature, is slow, tranquil, and organic; but no part of it requires to be undone. The child sees, imitates, or reproduces and invents new forms: these are the three steps in each subject for each pupil. Its most earnest disciples give it the name of *The New Education*.

The system has made great way in America, where institutions modelled more or less closely on its principles are numerous; and it is now making way in England. There is a Fröbel Society, which consists of a large number of thinkers and workers in education. The London and Birmingham school boards have introduced the system; and several training-colleges are working upon its lines. The best English books as yet on the subject are Laurie's *Kindergarten Manual*; Miss Shirreff's *Kinder-Garten*; Heerwart's *Music for the Kinder-Garten*; Köhler's *Praxis* (transl. by Miss Gurney); *The Kindergarten*; *Fröbel Society's Papers*, 1880.

KINDLE, v. *kīn'dl* [AS. *candel*, a candle: Icel. *kynda*, to set fire to; *kyndill*, a candle, a torch: Norw. *kvende*, chips and shavings for kindling fire: L. *candēre*, to shine, to glow (see CANDLE)]: to set on fire; to cause to burn with flame; to take fire; to excite to action; to animate; to inflame, as the passions. KIN'DLING, imp.: ADJ. causing to burn with flame. KINDLED, pp. *kīn'dld*. KINDLER, n. *kīn'dlēr*, one who kindles.—SYN. of 'kindle': to exasperate; fire; light; heat.

KINDLE, v. *kīn'dl* [AS. *cynde*, natural, native: Gael. *cinn*, to increase, to multiply; *cine*, or *cineal*, progeny: a dim. of *kind*, in the sense of race, produce (see KIND)]: in OE., to bring forth young; to produce. KIN'DLING, imp. KINDLED, pp. *kīn'dld*, engendered; brought forth. TO BE IN KINDLE, said of an animal heavy with young, applied to the small ones such as hares and rabbits.

KINDRED: see under KIN.

KINE, n. plu. *kīn* [AS. *cú*, a cow, *cy*, cows; *cuna*, of cows: Scot. *kye*, cows: *kine* for *kyen* is really in form a double plu.]: cows in general; a collective rather than a plu. noun.

KINEMATICS—KINETOSCOPE.

KINEMATICS, n. plu. *kĭn'ĕ-măt'iks* [Gr. *kinēma*, motion]: the science of pure motion, as distinguished from motion viewed in connection with material parts. **KIN'EMATIC**, a. *-măt'ik*, or **KIN'EMAT'ICAL**, a. *-ĭ kăt*, pertaining to. **KIN'EMAT'ICALLY**, ad. *-lĭ*. **KINEMATIST**, n. *kĭn-ĕm'ăt-ĭst*, one who is skilled in the science of kinematics. **KINEMATIC CHAIN**, a combination of the simple elements of a machine which occur in pairs.

KINESIATRICS, n. plu. *kĭn-ĕ-sĭ-ăt'rĭks* [Gr. *kinēsis*, movement; *iātrikos*, relating to a cure]: a system of cure in which the treatment consisted of certain muscular movements as regulated by the nature of the disease; also called **KINESITHERAPY**, n. *kĭnĕ'-sĭ-thĕr'ă-pĭ* [Gr. *therapeu'ō*, I heal].

KINESODIC, a. *kĭ-nĕ-sōd'ĭk* [Gr. *kinēsis*, motion; *hodos*, a way]: conveying motion.

KINETIC, a. *kĭn-ĕt'ĭk* [Gr. *kinētikos*, movable—from *kinēō*, I move, I set in motion]: active as opposed to latent; relating to motion; possessing energy. **KINETICS**, n. plu. *kĭn-ĕt'iks*, the theory which teaches that bodies, such as the gaseous, consist of molecules always in motion at a very high rate of velocity; science of motion in a fluid medium: science which investigates the action of force in producing or changing motion: see **DYNAMICS**: **FORCE**: **MOTION**: **MECHANICS**: ETC.

KINETOSCOPE, n. *kĭ-nĕ'to-skōp* [Gr. *kinētos*, movable; *skopeō*, I see, I observe]: instrument invented by Perigol, for illustrating the result of the combination of circular movements of different radii in the production of curves; called also **KINESCOPE**.

KING.

KING, n. *kīng* [Ger. *könig*; Icel. *konungr*, or *kongr*, a king—from Icel. *kyn*, a kind, a tribe: AS. *cynīng*, king—from *cyn*, a tribe, a race: OS. *kuning*, a king—from *kuni*, a tribe: Goth. *kuni*, race, head of the race: Skr. *ganaka*, a father, a king: 'What the husband was in his house, the lord, the strong protector, the king was among his people.'—*Max Müller*]: person vested with monarchical power in a state; a sovereign: V. in *OE.*, to supply with a king; to raise to royalty. **KING'ING**, imp. **KINGED**, pp. *kingd*. **KING'LESS**, a. without a king. **KING'LIKE**, a. like a king. **KING'LY**, a. *-lī*, suitable to the dignity of a king; royal. **KING'LINESS**, n. *-nēs*, the state of being kingly. **KING'-CRAFT**, n. *-krāft*, the art of governing—used in a bad sense. **KING'DOM**, n. *-dūm* [AS. *cynedom*, a kingdom—from adj. *cyne*, royal, and *dom*, power, office, jurisdiction]: the territory or country subject to a king; one of the three great divisions of nature, animal, vegetable, and mineral. **KING-DOMED**, a. *kīng'dūmd*. **KING'LET**, n. a little or petty king: also a bird (see below). **KING'LING**, n. a petty king. **KING'SHIP**, n. the state, office, or dignity of a king. **KING-FISH**, see **OPAH**: **LAMPRI**. **KING-POST**, the middle post of a roof standing on the tie-beam, and reaching up to the ridge, also called *crown-post* (see **ROOF**). **KINGWOOD**, a wood beautifully streaked in violet tints, used for ornamental work; brought in small pieces from Brazil; called also *violet-wood*; supposed to be the wood of a species of *Trip'tolōmēa*, nat. ord. *Leguminosæ*, sub-ord. *Papilionaceæ*. **KING-WORSHIP**, a loyalty so excessive as to approach idolatry. **KING OF TERRORS**, death. **KING'S EVIL**, a disease of a scrofulous nature, formerly believed to be cured by the touch of a king; scrofula (q.v.). **KING'S SILVER**, ancient fine paid to the king, in the court of common pleas in England, on alienation of certain lands. **KING'S YELLOW**, a pigment, mixture of orpiment (tersulphide of arsenic) and arsenious acid. **KING'S OR QUEEN'S COUNSEL**, in *Britain*, see below. **KING'S OR QUEEN'S EVIDENCE**, see below. **COURT OF KING'S BENCH OR QUEEN'S BENCH**, in *English usage*, one of the divisions of the Supreme Court of Judicature; previous to 1875 one of the high courts of law in which the *king* anciently sat in person: see **QUEEN'S BENCH**.—**SYN.** of 'kingly': regal; imperial; august; noble; sovereign; splendid; monarchical; magnificent.

KING: one vested with supreme power in a monarchical state. According to feudal usages, the king was the source from which all command, honor, and authority flowed; and he delegated to his followers the power by which they exercised subordinate rule in certain districts. The kingdom was divided into separate baronies, in each of which a baron ruled, lord both of the lands, which he held under the obligation of rendering military service to the king, and in many cases lord of the people also, who were vassals of the soil, and his liege subjects. In modern times, the kingly power often represents only a limited measure of sovereignty, various constitutional checks being in operation in different countries to control the royal prerogative. The king may succeed to the throne

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by descent or inheritance, or he may be elected by the suffrages of the nation, or by the suffrages of some body of persons selected out of the nation, as was the case in Poland. Even when the kingly power is hereditary, some form is gone through on the accession of a new king, to signify a recognition by the people of his right, and a claim that he should pledge himself to perform certain duties, accompanied by a religious ceremony, in which anointing with oil and placing a crown on his head are included as acts. By the anointing, a certain sacredness is supposed to be thrown round the royal person, while the coronation symbolizes his supremacy. There is now no very clearly-marked distinction between a king and an emperor (q.v.). A queen-regnant, or princess who has inherited the sovereign power in countries where female succession to the throne is recognized, possesses all the political prerogatives of a king.

In England, it is said that the king never dies, which means that he succeeds to the throne immediately on the death of his predecessor, without the necessity of previous recognition on the part of the people. He makes oath at his coronation to govern according to law, to cause justice to be administered, and to maintain the Protestant Church. He is the source from which all hereditary titles are derived, and he nominates judges and other officers of state, officers of the army and navy, governors of colonies, bishops and deans.* He must concur in every legislative enactment, and sends embassies, makes treaties, and even enters into wars, without consulting parliament. The royal person is sacred, and the king cannot be called to account for any of his acts; but he can act politically only through his ministers, who are not protected by the same irresponsibility. A further control on the royal prerogative is exercised by the continual necessity of applying to parliament for supplies of money, which practically renders it necessary to obtain the sanction of that body to every important public measure.



Crown of
Great Britain.

The Crown (q.v.) now in use as the emblem of sovereignty differs considerably in form in different countries of modern Europe; but in all cases it is distinguished from the coronets of the nobility in being closed above. For the royal crown of Great Britain, here represented, see CROWN. The helmet placed by the sovereign over his arms is of burnished gold, open-faced, and with bars. For the arms of the sovereign, see GREAT BRITAIN.

KING, CHARLES, LL.D.: educator: 1789, Mar. 16—1867, Sep. 27; b. New York; son of Rufus K. He was educated in England and Paris, learned the banking business in Holland, returned to New York and engaged in commercial business 1810, was U. S. commissioner to England to investigate the treatment of Dartmoor prisoners, for which he exonerated the British govt., was assoc. editor of the *New York American* 1823-27, and sole editor

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1827-45, assoc. editor of the *Courier and Enquirer* 1845-49, and pres. of Columbia College 1849-64. He was author of histories of the Croton Aqueduct and the New York Chamber of Commerce, and of many historical addresses.

KING, CLARENCE: b. Newport, R. I., 1842, Jan. 6: geologist. He graduated at the Sheffield Scientific School (Yale) 1862, was connected with the geological survey of Cal. 1863-66, planned and conducted a survey of the w. Cordillera system on the 40th parallel 1867-72, was director of the U. S. geological survey 1878-81, and has been engaged since in special geological work. He is a member of the National Acad. of Sciences, and of numerous American and foreign scientific bodies.

KING, JAMES M., D.D.: Meth. Episc. clergyman: b. Girard, Erie co., Penn., 1839, Mar. 18. He graduated at Wesleyan Univ. 1862, was prof. of natural science in Fort Edward Collegiate Institute, N. Y., 1862-68, licensed to preach 1865, and entered the regular work of the Meth. Episc. ministry 1868. In 1873 he was appointed to St. John's Church, New York, and has since continued in that city, holding the pastorate of the Park Avenue Church 1890. He is a manager and member of the committee on agencies of the American Bible Soc.; member, chairman of the committee on legislative action, and honorary corresponding sec. of the U. S. Evangelical Alliance; and has represented both the Alliance and the United Charities of New York before legislative committees in defense against attacks on unsectarian institutions receiving aid from the state and city treasuries. Dr. K. has strong thought, and a clear and impressive style.

KING, JONAS, D.D.: 1792, July 29-1869, May 22; b. Hawley, Mass.: Christian missionary. He graduated at Williams College 1816, and at Andover Theol. Seminary 1819, was ordained to the ministry (Congl.) in Charleston, S. C., 1819, Dec. 17, and engaged in missionary work there till 1821, when he was appointed prof. of Oriental languages and literature in Amherst College. After studying Arabic in Paris, he entered the service of the A. B. C. F. M., and labored in Egypt and Syria 1823-26. He returned to the United States, 1827, resigned his professorship 1828, declined a similar one at Yale, and agreed to take charge of a shipload of food and clothing contributed by the Ladies' Greek Committee of New York, and to act as their agent and missionary in Greece. He began his Greek work at Poros 1828, July 28, and his preaching and teaching were kindly received by the civil authorities and the people. In 1829 he married an influential Greek woman, and his independent mission was placed under the care of the A. B. C. F. M. In 1831 he removed to Athens, where he passed the remainder of his life. By 1832 he had established 5 schools, conditional on being permitted to teach the Scriptures in them; in 1835 organized his first theological class; and 1839 built a large school-house. While he was thus successfully carrying on his work, with the ex-

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pressed approbation of the Greek ministers of education and the interior, the authorities of the Greek Church began persecuting him. The people were warned against the American schools, and threats of excommunication were uttered against those who sent their children to them. Various newspapers accused him of speaking against the doctrines of the Greek Church, an accusation which he answered by showing in quotations that the greatest fathers of that church had taught precisely what he was teaching. In 1845 he was excommunicated by the Synod of Athens; 1846 was summoned before the Areopagus and condemned to be tried in the felon's court in Syra, but the civil authorities did not allow the trial to take place; and 1847 further accusations against him were made and disproved, and the king privately advised him to leave the country temporarily. On the appointment of a new and more friendly ministry 1848, he returned. In 1851 he was appointed U. S. consular agent at Athens, but the persecutions did not cease. In 1852, Mar., he was condemned to 15 days' imprisonment and to exile. An appeal to the Areopagus had no effect, but a protest in the name of the U. S. govt. secured his release, and in the summer following the U. S. minister made an investigation of the case, on which the king released him from the imposed penalties. From this time not only was his work unimpeded, but the cause of religious liberty in Greece was greatly advanced. He revised and translated into modern Greek 16 vols. of religious literature, and published 10 vols. of original works in Greek, Arabic, and French. He received the degree D.D. from Princeton College 1832.

KING, RUFUS: journalist: 1814, Jan. 26—1876, Oct. 13; b. New York; son of Charles K. and grandson of Rufus K. He graduated at the U. S. Milit. Acad. 1833, was assigned to the engineer corps, and resigned 1836 to become asst. engineer on the New York and Erie railroad. In 1839-43 he was adjt. gen. of N. Y.; 1841-45 assoc. editor of the Albany *Evening Journal* and the *Advertiser*; 1845-61 editor of the Milwaukee *Sentinel*; and 1861, Mar. 22—Aug. 5, U. S. minister to Italy. He resigned the latter office at the outbreak of the rebellion, hastened home, was appointed brig. gen. of vols., commanded a div. at Fredericksburg, Groveton, Manassas, Yorktown, and Fairfax, and resigned 1863, Oct., on being reappointed U. S. minister to Italy. He held this office till 1867, July 1, and was afterward dep. comptroller of customs at New York.

KING, RUFUS, LL.D.: 1755, Mar. 24—1827, Apr. 29; b. Scarborough, Me.: statesman. He graduated at Harvard College 1777; was admitted to the bar and began practicing at Newburyport, Mass., 1780; was elected a member of the general court 1782, and by it was chosen a delegate to the continental congress 1784; introduced a resolution (1785) to prohibit slavery in the N.W. Territories, which was afterward adopted in the ordinance for the govt. of that region; and was a member of the federal constitution convention 1787. He secured the ratification of the con-

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stitution by Mass., despite violent opposition, gave up his law practice, and removed to New York 1788. In 1789 he was elected a member of the N. Y. assembly and the U. S. senate, and 1795 was re-elected senator. He advocated in the senate and in the press the ratification of the Jay treaty with Great Britain 1794, declined Pres. Washington's offered appointment of sec. of state, and was appointed U. S. minister to England 1796. He discharged the duties of that trying office with dignity and firmness till 1803, when he resigned, returned to New York, and settled on a farm on Long Island for a period of rest. He was opposed to the declaration of the war of 1812, but supported the govt. in its prosecution, as a member of the U. S. senate, to which he was again elected 1813. In 1816 he was defeated as federalist candidate for gov. of N. Y.; 1819 was a fourth time elected U. S. senator; and 1825, on the expiration of his senate term, was induced by Pres. John Quincy Adams to accept a reappointment as U. S. minister to England. He was cordially received in London, but after a few months his health began to fail, and he resigned 1826.

KING, THOMAS STARR: 1824, Dec. 16—1864, Mar. 4; b. New York: Universalist minister. He acquired a limited education, accompanied his parents to Charlestown, Mass., 1835, and on the death of his father, a Universalist minister (1839), went to work in a dry-goods store. He was anxious for a college education, but family necessities intervened, and he remained in the store till an opportunity was offered for becoming asst. teacher in the Bunker Hill grammar school. From this school he went to one in Medford, Mass., as principal, and while there studied for the ministry with Hosea Ballou (q. v.). In 1845 he preached his first sermon in Woburn, 1846 was called to his father's former church (Universalist) in Charlestown, 1848-60 was settled over the Hollis Street Church (Unitarian) in Boston; and from 1860 till his death was pastor of the Unit. church in San Francisco. Before removing from Boston he had acquired wide fame as a popular lecturer and a powerful writer. This reputation preceded him to Cal., and soon after his settlement in San Francisco he began receiving invitations from many Pacific slope cities to lecture and preach. He was very active in the presidential canvass 1860, using all his great talents to dissuade the people from attempting to set up a Pacific republic at the cost of withdrawal from the Union, and urging with rare eloquence that it was the duty of every loyal citizen to give his full and hearty support to the preservation of the Union. His labors in the pulpit, on the platform, and through the press did more to keep Cal. out of the Confederacy than those of any other person; and after the war had opened he was earnest in promoting the usefulness of the U. S. Sanitary Commission. He laid the corner-stone of a new church building for his congregation 1862, Sep., and assisted in dedicating it 1864, Jan. 10, a few weeks before his death.

KING—KING-AT-ARMS.

KING, WILLIAM RUFUS: 1786, Apr. 6—1853, Apr. 18; b. Sampson co., N. C.: lawyer. He graduated at the Univ. of N. C., 1803; was admitted to the bar 1806; elected a member of the legislature 1806,7; appointed state solicitor for the Wilmington district 1807; again member of the legislature, 1808,9; member of congress 1810-16; sec. of the U. S. legations to Naples and Russia 1816-18; U. S. senator 1819-44; U. S. minister to France 1844-46; U. S. senator 1848-52; pres. of the senate 1850; and vice-pres. of the United States 1853, Mar. 4—Apr. 18. While in the senate he supported the policies of Andrew Jackson and Martin Van Buren; as minister to France he prepared the way for the annexation of Tex. free from foreign intervention. After his election as vice-pres. on the ticket with Franklin Pierce, his health failed rapidly, and being unable to be inaugurated with the pres.-elect, the official oath was administered to him by order of congress in Havana, whither he had been ordered by physicians. He did not live to enter on his official duties.

KING-AT-ARMS, or KING-OF-ARMS: one of the principal heraldic officers of any country. There are four kings-at-arms in England, named respectively Garter, Clarencieux, Norroy, and Bath, but the first three only are members of the College of Arms.

Garter principal king-of-arms was instituted by Henry V., 1417, for the service of the order of the Garter: his duties include the regulation of the arms of peers and the knights of the Bath. In the capacity of king-of-arms of the order of the Garter, he has apartments within the castle of Windsor, and a mantle of blue satin, with the arms of St. George on the left shoulder, besides a badge and sceptre.

Clarencieux and Norroy are provincial kings-of-arms, with jurisdiction s. and n. of the Trent respectively. They arrange and register alone or conjointly with Garter the arms of all below the rank of the peerage.

The crown of a king-of-arms is of silver gilt, and consists of a circle inscribed with the words, *Miserere mei Deus secundum magnam misericordiam tuam*, supporting 16 oak leaves, each alternate leaf higher than the rest. Within the crown is a cap of crimson satin turned up with ermine, and surmounted by a tassel wrought of gold silk. Kings-of-arms were formerly entitled to wear their crowns on all occasions when the sovereign wore his; now they assume them only when peers put on their coronets. The installation of kings-at-arms anciently took place with great state, and always on a Sunday or festival-day, the ceremony being performed by the king, the earl-marshal, or some other person duly appointed by royal warrant.

Bath king-of-arms, though not a member of the college, takes precedence next after Garter. His office was created 1725 for the service of the order of the Bath. He is principal herald of Wales; and either alone, or jointly with Garter, grants arms to persons residing within the principality.

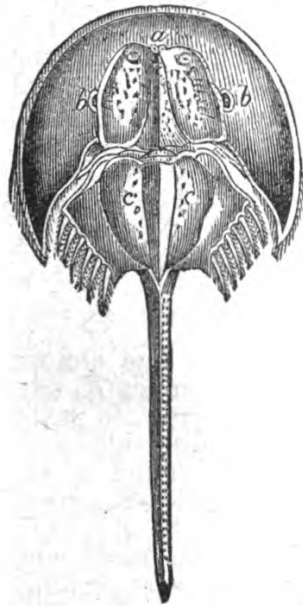
The chief heraldic officer for Scotland is called Lyon

KING-BIRD—KING-CRAB.

King-of-arms (q.v.), who since the Union has ranked next to Garter. His title is derived from the lion rampant in the Scottish royal insignia, and he holds his office immediately from the sovereign, and not as the English king-at-arms, from the Earl-Marshall. His crown is of the same form with the imperial crown of the kingdom, but not set with stones. Before the Revolution he was crowned by the sovereign, or his commissioner, on entry on office.

There is one king-of-arms in Ireland, named Ulster.

KING'-BIRD: characteristic N. American bird, of genus *Tyrannus*, family *Tyrannidae*, ord. *Passeres*. It is a summer visitant in Canada and the n. states, ranging as high as 57° n. lat., wintering in the south even as far as e. Peru. It is named from its imperious and pugnacious treatment of other birds, which the cock, in the breeding season, through care of either his mate or his young, attacks fiercely in their flight, forcing them to turn from their course. Every large bird that approaches his nest, even the eagle, is assailed by him and with loud piercing cries; and only more power of wing enables them to evade his repeated attacks. The American species, *Tyrannus papiri*,



King-Crab (*Limulus Polyphemus*):

Copied from *English Cyclopædia*.

a, position of the two smooth eyes; b, b, lateral composite eyes; c, c, respiratory apertures.

seems to feed entirely on insects which it seizes on the wing. Its nest is large and coarse, but neatly lined with fine grasses: its five or six eggs are of pale salmon color with purple, brown, and orange spots generally near the larger end. The K. is 8 to 9 inches long; color, dark bluish ash above, pale bluish ash on breast and throat, bluish black on top and sides of head. The K. resembles in several respects the Shrikes, in other respects the Flycatchers, with which indeed it has been confounded; but there is really no near affinity, and the differences are deep-seated. —The Petchary (q.v.) or Chicheree, of the W. Indies (*T. dominicensis*) is nearly akin to the K., and is even more pugnacious.

KING'-CRAB, or HORSE-SHOE CRAB—from the shape of its carapace or shield—(*Limulus*): genus of *Crustacea*, ranked by Cuvier among the *Entomostraca*; but so widely differing from all the rest of the *Crustacea*, that Milne-Edwards makes it a sub-class by itself. The head and thorax are

united, and are covered by a shield convex above and concave beneath. The abdomen is more or less hexagonal, no division into rings appears in it, and it is covered by a shield not so broad as that of the head and thorax. On

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each side it has along the margin six movable spines directed backward and outward; and attached to it is a tail, which forms a long and strong dagger-like spine, sometimes exceeding in length the whole body of the animal. The legs are not large enough to be visible beyond the shield when the animal moves along the ground.—These remarkable animals are found only on the shores of tropical Asia, the Asiatic archipelago, and America. They feed on animal food; and are said to be themselves less agreeable food than crabs or lobsters. Some of them exceed two ft. in length, and the strong and jagged spine is a formidable weapon. In some of the Asiatic islands, the spine is often used for pointing arrows. In tropical America, the K. is called *Casserole Fish*, and the shell is used as a ladle. The number of species of K. is not great.—Fossil species are numerous. Trilobites are supposed to have been allied to the *Limuli*.

KINGFISHER (*Alcedo*): genus of birds of the order *Insectores*, family *Halcyonidae*. The name is often ex-



Kingfisher (*Alcedo ispida*).

tended to the whole family; the only British and almost the only European species of which is the Common K. (*A. ispida*), a bird not much larger than a sparrow, in brilliancy of color rivalling the finest tropical birds—blue and green being prevailing colors. The K. is found in all parts of Europe except the most northern, and over a great part of Asia and Africa. It frequents the banks of rivers and streams, and is often seen flying near the surface of the water. Its food consists of small fishes, such as minnows, sticklebacks, and trout or salmon fry, and of leeches and water-insects. When it has caught a fish, it often kills it by beating on a branch, and always swallows it head foremost. The indigestible parts are afterwards disgorged.

It is very probable, although not certain, that the K. is the *Halcyon* of the ancients, about which many wonderful fables were current among them: of its having power to quell storms, of its floating nest, and the stillness of the winds during the time necessary for its safety, etc. Shakespeare makes repeated allusion to the popular notion, that if the stuffed skin of a K. or Halcyon is hung up by a thread, the bill will always point to the direction from which the wind blows: see **HALCYON**.

KING GEORGE'S SOUND—KINGS.

The BELTED K. (*Alcedo Halcyon* or *Ceryle Halcyon*) of N. America is a much larger bird than the K. of Britain, being fully 12 inches in length. It is common on most of the rivers of N. America, to 67° n. lat. in summer, but migrates southward in winter, and is then found in the W. Indies. Its colors are dull when compared with those of the common kingfisher.

Many species of K. are found in the warmer parts of the world. Some of them, forming the genus *Ceryx*, lack the hind toe. The common European K. may be regarded as the type of the family, which belongs to the group called *Syndactyle Birds*, and is characterized by the much-united toes. The form is bulky; bill long, straight, quadrangular, sharp and heron-like; wings, tail, and legs short, and feet small.

KING GEORGE'S SOUND: inlet at the s.w. angle of Australia, an excellent roadstead, containing two land-locked recesses, Princess Royal and Oyster Harbors. On the former stands Albany, the coaling depot of the Peninsular and Oriental Company's steamers.

KINGLAKE, *kīng'lāk*, ALEXANDER WILLIAM: born Taunton, Somersetshire, England, 1802, studied at Eton and Trinity College, Cambridge, and—having chosen the law as a profession—was called to the bar 1837. His practice soon became very great; nevertheless, he found time to make a tour in the east, the result of which was a book, *Eothen* (1844), descriptive of his adventures and impressions. It attained astonishing popularity, passing through many editions both in England and America, and being extensively translated on the continent of Europe. The graceful vigor and liveliness of the style have made *Eothen* a model for subsequent works of a similar kind, but none have yet reached the exquisite talent of the original. In 1857, K. entered parliament as member for Bridgewater. Vols. I. and II. of his *Invasion of the Crimea* appeared 1863, and fully sustained his literary reputation; but the virulent antipathy shown toward the French emperor and all the actors in the *coup d'état* did not beget confidence in him as a historian. Vols. III., IV. were published 1868, V. in 1875, and VI. in 1880.

KINGLET, *kīng'lēt* (*Regulus cristatus*): Golden-crested Wren, smallest of British birds. This species is type of a small group of the Warblers, though by some classed with the Titmouse family. It crosses in vast flocks from Scandinavia to the e. coast of Britain in autumn. The K. is of generally olive-green color, with yellow head, and black wing coverts, sometimes white tipped. It makes a beautiful and soft nest; and is a very social little bird, often joining bands of other species of titmouse. There are also Asiatic species of *Regulus*: and N. America has two well-known species, *R. satrapa*, and *R. calendula* or Ruby-crowned Wren, whose loud song resembles that of the sky-lark or canary.

KINGS, FIRST AND SECOND BOOKS OF (*Melakim*): two of the canonical books of the Old Testament. Originally, they

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were but one, and were separated by the Seventy, by whom they are designated 'the third and fourth of the kingdoms'—the Books of Samuel forming the first and second. This division, copied by the Vulgate, passed thence into the general usage of Christendom. The exact titles of these books in the English Authorized Version are—*The First Book of the Kings, commonly called the Third Book of the Kings, and The Second Book of the Kings, commonly called the Fourth Book of the Kings.* They embrace (1) the reign of Solomon, (2) the history of the divided kingdoms of Judah and Israel, (3) the history of the kingdom of Judah after the dispersion of Israel, until the Babylonian captivity—a period of about 570 years in all. The books appear to be not vague compilations from royal annals and other—rather contradictory—sources, as is held by some, but rather the diligent work of a historian—with a clear and distinct tendency—who gathered together all the written and unwritten information useful for his purpose. The unity of style and language is indeed palpable throughout, nor are any later alterations of consequence apparent. The principal sources quoted are a *Book* [of the Chronicles] *of Solomon*, further a *Book of the Chronicles of the Kings of Israel*, and another *of the Kings of Judah.* The Talmud, and some of the earlier Christian theologians, ascribe it to Jeremiah; this view is maintained by Hävernicks and other eminent modern scholars. Huet and Calmet are in favor of Ezra; but all that can be positively asserted is, that the compiler lived during the second half of the Captivity, and after the death of Joiachin, and probably in Babylon. The spirit of the work is *theocratico-prophetic* in a high degree (its historical fidelity with respect to the political events is generally recognized; but the stories relating to the prophets Elijah and Elisha are referred to the province of legend by a certain class of modern critics who refuse to receive testimony for miracles); while the spirit of Chronicles (which goes over much the same ground) is held to betray the predominance of priestly influence. One of the best modern commentaries is that by Thenius (Leip. 1845).

KING'S COLLEGE, Cambridge, England: founded 1441 by Henry VI., for a provost, 70 fellows and scholars, three chaplains, with clerks, choristers, servitors, and poor scholars—in all, 140. Its revenues were seriously diminished by Edward IV. The chapel is the work of the three Henries, VI., VII., VIII. The architect is supposed to have been Nicholas Cloos, or Klaus, fellow of the college, and Bp. of Lichfield, or, as others say, his father. It is perhaps the finest specimen of perpendicular Gothic in the world. Its internal dimensions are 290 ft. long, 45 wide, and 78 high. There is an inner roof of stone, which, though enormously massive has, from its proportions, and the beauty of the groining, the most airy and pleasing effect. Under the statutes of 1861, the foundation consists of 46 fellows, and not less than 48 scholars, governed by a provost. 24 of the scholarships are appropriated to the scholars of Eton College. The fellowships are open to all members of the college of sufficient standing. In 1871, a scholarship

KING'S COLLEGE—KING'S DAUGHTERS.

of £80, tenable for three years, was established for natural science.

KING'S COLLEGE, London: proprietary institution occupying the e. wing of Somerset House, founded 1828 on the fundamental principle:—‘that instruction in the Christian religion ought to form an indispensable part of every system of general education for the youth of a Christian community.’ The college being strictly in connection with the Church of England, church service is a regular part of its routine. The course embraces theology, general literature and science, applied sciences, and medicine. A limited number of matriculated students reside within the walls. The museum contains the calculating-machine of Mr. Babbage, and George III.’s collection of mechanical models and philosophical instruments, the latter presented by the queen. There is a school in connection with the college.

KING'S COUNTY: inland county of Ireland, bounded e. by Kildare, w. by the Shannon which separates it from Roscommon and Galway; 493,985 statute acres, of which 353,256 are arable and 8,258 in plantations. In 1879, 119,751 acres were under crops, and only 66 were lying fallow. The surface is in general flat; it includes, however, in the s. a portion of the Slieve Bloom Mountains, from which a line of low limestone hills extends n.e. through the centre of the county, forming a water-shed between the basin of the Shannon on the w. and those of the Boyne and Barrow on the e. The soil, a light loam of medium depth, resting on limestone gravel, is of average fertility. The Bog of Allen (q.v.) extends from w. to e. the whole length of the county, and the Grand canal traverses the n. portion. Notwithstanding great tracts of bog, the climate is not unhealthful. Two members are returned to the imperial parliament. In the n.w. are the ruins of the abbey Clonmacnoise, founded 548, exceedingly rich in ancient monumental remains, and one of the most interesting of the many ruined ecclesiastical structures in Ireland. The county contains many other religious foundations, as well as numerous feudal castles chiefly of the Elizabethan period, some still inhabited. Pop. (1851) 112,076; (1861) 90,013; (1871) 75,900; (1881) 72,852; of whom 64,984 were Rom. Catholics, 6,750 Episcopalians.

KING'S DAUGHTERS, ORDER OF: organization of American women, irrespective of age or religious faith, founded in New York 1886, Jan., by Mrs. Margaret Bortome, for the purpose of uniting all Christian women in a sisterhood of religious and charitable service. The badge of the order is a small Maltese cross in silver suspended from a royal purple ribbon; the motto, ‘In His Name.’ The various bodies, supreme and subordinate, are called ‘Tens,’ and each subordinate may have an unlimited number of members, and add to the ‘Tens’ any distinctive name that they choose, as ‘Hospital Tens,’ ‘Reading Tens,’ ‘Floral Tens,’ ‘Sewing Tens’—all engaged in hospital work, etc. The injunctions of the order are: ‘Look forward and not back;’ ‘Look out and not in;’

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'Look up and not down;' and 'Lend a hand.' The badge is to be worn conspicuously at the throat or on the breast, and recognition is by the members touching or pointing to their own badges, shaking hands, and while doing so repeating the motto, 'In His Name.' It was estimated 1889, July 1, that there were more than 40,000 K. D. in the United States, ranging from the girl of 5 or 6 years of age to the woman of 80 years; and the order had proved so popular and beneficial that steps were taken to form a co-operating order of King's Sons.

KINGSLEY, *kingz'li*, CHARLES: English clergyman, poet, and novelist, late chaplain in ordinary to the queen: 1819, June 12—1875, Jan. 23; b. Holne Vicarage, Dartmoor, Devonshire. He entered Magdalen College, Cambridge, 1840, where he highly distinguished himself in classics and mathematics. In 1844, he became curate and shortly afterward rector of Eversley, Hampshire. In the same year he published *Village Sermons*, characterized as honest, downright wisdom, conveyed in plain and simple style deemed by many his best pulpit efforts. His sermons however were prepared for preaching rather than for print. In 1848, appeared *The Saint's Tragedy, or the True Story of Elizabeth of Hungary*, an admirable and truly catholic representation of mediæval piety. The next two or three years of his life were devoted—in company with his friend Mr. Maurice and others—to a series of efforts for the amelioration and Christianization of the working-classes. To these efforts may be traced the origin of those beneficial co-operative associations in which the workmen are also the masters. His opinions on the social disquietude of modern times are given in his *Alton Locke, Tailor and Poet* (1849), a novel of extraordinary power and fascination, the hero of which is found in a London workshop. This was followed 1851, by *Yeast, a Problem*, in which K. handles, among other questions, the condition of the English agricultural laborer; and 1853, by *Hypatia or New Foes with an Old Face*, a most vigorous and brilliant delineation of Christianity in conflict with rude Gothic paganism and the expiring philosophy of Greece, in the early part of the 5th c. Both these works appeared in *Fraser's Magazine*. Two years later he published *Westward Ho!* probably the greatest of his works. Its glowing pictures of S. American forests are said to have excited the admiration of Humboldt, who had himself really *seen* what K. only *imagined*. Other works of his are—*Message of the Church to Laboring Men*; *Sermons on National Subjects, preached in a Village Church*; *Phaethon, or Loose Thoughts for Loose Thinkers*; *Alexandria and her Schools*; *Sermons for the Times*; *Glaucus, or the Wonders of the Shore*; *The Heroes, or Greek Fairy Tales*; *Two Years Ago*; *The Water Babies*; *Good News of God*; *Hereward, the Last of the English* (1866); *The Hermits* (1867); *How and Why* (1869); *At Last, a Christmas in the West Indies* (1871). He was appointed prof. of modern history at Cambridge, 1859; and after resigning that post, was made, 1869, canon of Chester. He had bright wit, wide information, admirable powers of expression, a broadly catholic spirit, inde-

KING'S LYNN—KINGSTON.

pendence in thought and action, facility and industry in labor, and most tender and generous sympathy with all human suffering and need. He was a faithful Christian pastor to his humble flock. A biography by his wife appeared 1876.

KING'S LYNN: see LYNN.

KING'S MOUNTAIN, BATTLE OF: 1780, Oct. 7, at the s. extremity of the King's Mountain range in York co., S. C.; between British troops under Lieut.Col. Ferguson and American under Col. Cleaveland. The British force was about 1,200, and was on the way to rejoin Lord Cornwallis at Charlotte, N. C., after having scoured the w. part of S. C. The Americans mustered about 900, and having intercepted several of Ferguson's letters to Cornwallis reporting his dangerous position, marched all night Oct. 6, 7, and dividing into three bodies, suddenly attacked the British then encamped on the slope of the mountain. The battle was waged with great bravery on each side for an hour, and then with the death of the British commander his men surrendered. The British lost 240 killed and wounded and nearly 800 prisoners, and the Americans 20 killed and many more wounded.

KINGS OF THE ORIENT, THE THREE: see MAGI.

KING'S (OR QUEEN'S) COUN'SEL (usually contracted Q. C.): in England and Ireland, certain barristers at law, who have been called within the bar, and have been appointed by letters-patent to be her majesty's counsel. The office is entirely honorary, but it gives a right of pre-audience in all the courts, according to the date of appointment. The appointment practically belongs to the lord chancellor. Though called her majesty's counsel, they are not prevented from being retained and acting for ordinary clients, except that in defending prisoners and acting in suits against the crown, they require a special license from the crown, which is, however, never refused. In Scotland, there is no distinction of queen's counsel, but the lord advocate and solicitor-general are so in reality. The appointment of queen's counsel is for life, but in case of disgraceful conduct, the letters-patent are revoked, as was done 1862 to Edwin James, who, 1873, applied in vain for restitution.

KING'S (OR QUEEN'S) EVIDENCE: in Britain, a person, who, having been an accomplice in some crime, has confessed, and offered to give evidence, and make full confession. The usual practice of the crown, in such cases, is to pardon the person so acting, though he is not absolutely entitled to a pardon; and an application is generally made to the judge, to admit the party as a witness, on the trial of the fellow-criminals. A similar practice exists in Scotland, the public prosecutor having the power and discretion to admit the confessing party.

KINGSTON, *kingz'ton*: city, cap. of Ulster co., N. Y., on the Hudson river, Rondout creek, and the Delaware and Hudson canal; and on the New York West Shore and

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Buffalo, the Wallkill Valley, and the Ulster and Delaware railroads; also connected with the Hudson River railroad by steam ferry across the river to Rhinecliff. It has a wharfage front of 4 m.; co. court-house; city hall; volunteer fire dept.; gas and electric light plants; costly water-works; 4 lines of passenger steamboats connecting with New York, Albany, and intermediate points; 24 churches; several graded and ungraded public schools; acad., seminaries, and large private schools; 3 national banks (cap. \$525,000), 2 savings banks; and 2 daily and 3 weekly newspapers. Its industrial interests comprise 13 carriage manufactories; 5 iron foundries and machine shops; 6 brick-yards; 5 ship-yards; the largest cement and lime manufactory in the country, which produces about 1,000 barrels of cement daily; and the working of blue-stone flagging quarries, which are scattered through a region nearly 100 m. long, extending from the Delaware river to the Hudson; beside breweries, and cigar, glue, and leather factories. K. owns 43 steamboats, receives annually about 1,500,000 tons of coal by canal, and ships annually to New York about 1,000,000 tons of blue-stone, brick, ice, lime, and lumber. The city has also a large grain and flour trade. K. was chartered 1661, permanently settled 1665, incorporated by patent 1667, incorporated as a town 1805, and incorporated as a city, comprising the incorporated villages of K. and Rondout and the small village of Wilbur, 1872. In 1777, Feb., the first N. Y. state convention adjourned from Fishkill to K., and Apr. 20 the first state constitution was adopted here and proclaimed Apr. 22. In Sep. following the legislature assembled here, but adjourned on the approach of the British under Sir Henry Clinton, who occupied, plundered, and burnt the town Oct. 7.—Pop. (1870) 6,315; (1880) 18,344; (1885) about 19,000.

KINGS'TON: city in the Canadian province of Ontario, lat. 44° 8' 30", long. 76° 30' 1", on the n.e. shore of Lake Ontario, at the mouth of the Cataraqui and the Bay of Quinté, where the waters of the great lakes issue into the St. Lawrence; 198 m. from Montreal, 165 from Toronto, 274 from New York. Its site was occupied by a French fort named Frontenac 1673-1758, settled by the British about 1783, laid out 1793, incorporated as a town 1838, city 1846. On the union of the two Canadas, 1840, the seat of government was established at K., but was removed 1845. Its harbor is sheltered by Wolfe and Garden Islands, two or three m. off, and is the place of transshipment of cargoes between the lakes and the St. Lawrence and the Rideau canal. The ship-building is second in Canada only to that of Quebec. There are several large foundries for manufacture of engines, locomotive and stationary, of agricultural implements, edge-tools, axles, nails, etc.; also large tanneries and breweries. The Grand Trunk railway, which passes within two m. of the city, was 1863 connected with it by a branch-line. Next to Quebec and Halifax, K. is the most important military position in British America. Queen's University and College at K., incorporated 1841, for the education of a Pres-

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byterian ministry, has since instituted the additional faculties of law and medicine. The recently founded Royal Military College is unique in Canada. K. is the seat of the Anglican bishop of Ontario, also of a Rom. Cath. bishop. Pop. (1871) 12,407; (1881) 14,091.

KINGS'TON: commercial capital of Jamaica (q.v.), on the n. of a landlocked harbor, the best in the island, and one of the best of its size in the world. It was founded 1693, after the neighboring town of Port Royal had been destroyed by an earthquake. From this place, afterward rebuilt, it is separated by its noble haven; while with Spanish Town, toward the interior, it has, since 1846, been connected by railway. K. was visited 1880 by an unusually destructive hurricane, and 1882, Dec., by a disastrous conflagration. Though part of the city is filthy and disorderly, it yet presents several handsome features. A large square, the Parade, contains spacious barracks, a Wesleyan chapel, a theatre, and some tolerable dwelling-houses. The negro market for fruits and vegetables is a lively and interesting scene. The temperature, generally oppressive on the immediate margin of the bay, becomes gradually mitigated toward the head of the sloping streets, which rise into the region of the sea-breezes. Most of the trade of Jamaica passes through Kingston. Pop. abt. 45,000.

KINGS'TON, or Kings'town: capital of the British island of St. Vincent, W. Indies, on the s.w. coast. Pop. about 5,000.

KINGS'TON-ON-HULL: see HULL.

KINGS'TON-UPON-THAMES: municipal borough and market-town of England, county of Surrey, 10 m. s.w. of London, on the right bank of the Thames, here crossed by two handsome bridges, one of stone, the other an iron viaduct on the London and S.W. branch railway connecting Twickenham with Wimbledon. The county spring assizes are held in K., alternately with Croydon and Guildford. Educational and benevolent institutions are numerous; there are flour, cocoa-nut fibre, and oil-mills, and brick-works. Around the Surbiton station, on the main line of the London and S.W. railway, about a mile and a half from Kingston market-place, has grown up, since 1838, the elegant suburb of Surbiton, now joined to the town. In the neighborhood are Hampton Court Palace, and Bushy and Richmond Parks. Numerous Roman remains have been discovered in the vicinity of K., and as early as the Saxon period it had risen into importance. Here, 838, a great council was held under Egbert of Wessex and Ethelwolf of Kent, and a treaty agreed to; and here seven of the Anglo-Saxon kings were crowned. The town is said to be named from the stone on which the ceremony was performed, which stands in one of the streets, inclosed by a railing. Hampton Wick (pop. 2,163) is really part of K., being connected by the bridge, though on the other side of the Thames, and in Middlesex. Pop. of K. (1871) 15,263; (1881) 19,875.

KINGSTOWN—KINKAJOU.

KINGSTOWN: thriving and important seaport of Ireland, on the s. shore of Dublin Bay, six m. s.e. of the city Dublin. Previous to 1817, when the harbor-works were commenced, it was merely a fishing-village. At the visit of George IV. 1821, Sep., its former name, *Dunleary*, was changed to Kingstown. The area of the harbor is 250 acres, with a depth of 13 to 27 ft. The situation of the town, and the invigorating air, have made K. an important watering-place. The mail-packets sail from K. to Holyhead twice a day, and there is regular communication by steamer between it and the principal Irish and British seaports. Coal, iron, and timber are imported, and cattle, corn, lead ore, and granite are exported. About 1,450 vessels of 220,000 tons anchor in the harbor yearly. Pop. (1861) 11,584; (1871) 16,378; (1881) 18,230.

KING-TIH-CHING, *k'ing-tê-ch'ing'*: town of China province of Kiang-si, 240 m. s.w. of Hangchow, on a small river which falls into Lake Poyang. It is the principal seat for the manufacture of porcelain in China, for which, it is said, 500 furnaces are employed. Pop. above 500,000.

KINIC ACID, n. *k'ín'ík* [from *kina-kina*, a name for cinchona]: an organic acid found in combination with quinia in the bark of various species of cinchona, principally yellow and pale Peruvian bark.

KINK, n. *k'íngk* [Dut. and Sw. *kink*, a twist in a cable: Icel. *kengr*, a crook of metal, a bend or bight]: the spontaneous twist of a rope or thread when doubled, or from stiffness; seldom occurring in the best rope: V. to double and twist spontaneously. **KINK'ING**, imp. **KINKED**, pp. *k'íngkt*.

KINKAJOU, *k'íng'ka-jô* (*Cercoleptes caudivolvulus*): quad-



Kinkajou (*Cercoleptes caudivolvulus*).

ruped of family *Ursidæ*, and allied to the raccoons and coatis.

KINKEL—KINO.

By some naturalists it is referred to *Viverride*. It has six incisors, one canine tooth, and five molars in each jaw, the three hinder molars tuberculous. The K. is larger than a pole-cat, has a yellowish woolly fur, climbs trees, feeds on fruits, honey, etc., as well as on small animals, and from its ravages among the nests of wild-bees, is in some countries called *Honey Bear*. It is a native of warm parts of America. The negroes have transferred to it the name of *POTTO*, from a lemurine animal of Africa. It is easily tamed.

KINKEL, *kīnk'el*, JOHANN GOTTFRIED: German author: 1815, Aug. 11—1882, Nov. ; b. Oberkassel. He studied theology at Bonn, and was a distinguished Protestant preacher; but becoming involved in the revolutionary movements of 1848, he was imprisoned in the fortress of Spandau. He escaped, and came to America, but soon went to London, where he taught. In 1860, he became a prof. of archeology and art at Zürich, where he died. K. was both a poet and a distinguished author on art. His principal works are *Predigten über Bildreden Christi* (1842); *Gedichte* (1843); *Otto der Schütz* (1843), beautiful narrative poem which had at his death passed through more than 40 editions; *Die Altchristliche Kunst* (Bonn 1845), history of the arts among Christian nations; *Nimrod*, drama (1857); *Der Schmied von Antwerp* (1872); works on Euripides, Rubens (1874), and on Mosaics.—JOHANNA K. (d. 1859), wife of Johann, distinguished musician, wrote *Acht Briefe über den Clavierunterricht* (Stutt. 1849); and with her husband, *Erzählungen* (Stutt. 1849). After her death appeared her novel, *Hans Ibeles in London* (Stutt. 1860).

KINNAIRD'S HEAD, *kīn-nārdz' hēd*: promontory with a light-house, on the n. e. coast of Aberdeenshire, Scotland, near Fraserburgh, lat. 57° 42' n., long. 2° west.

KINO, *kī'nō* [F. *kino*]: astringent substance, resembling CATECHU (q.v.) and GAMBIR (q.v.), the concrete exudation of certain tropical trees, especially of *Pterocarpus marsupium*, native of the mountains of Coromandel, which yields EAST INDIAN K.; and of *P. erinaceus*, native of Gambia, which yields AFRICAN KINO. The genus *Pterocarpus* belongs to nat. ord. *Leguminosæ*, sub-ord. *Papilionaceæ*, and has a 5-toothed calyx, and an irregular, nearly orbicular one-seeded pod, surrounded with a wing.

East Indian K. is the kind which now chiefly occurs in commerce, and is the ordinary K. or *gum kino* of the shops. It is in small angular glistening fragments, the smaller reddish, the larger almost black. Thin pieces are ruby red. It is brittle and easily powdered, has no smell, but a very astringent taste. BENGAL K. is a similar astringent substance, produced by *Butea frondosa*: see BUTEA. It has been found capable of the medicinal uses of true kino. BOTANY BAY K. is the produce of *Eucalyptus resinifera*: see EUCALYPTUS.

The astringency of K. is due mainly to its containing tannic and catechuic acid, and in consequence of this property, it is employed in medicine in certain forms of diar-

KINOLOGY—KINTYRE.

rhea (specially when a flux continues from want of tone in the intestinal capillaries), the best mode of prescribing it being as *compound kino powder*, a mixture of kino, cinnamon, and opium—the dose for an adult ranging from ten grains to a scruple. There is also a *tincture of kino*, which, properly diluted with water, forms an excellent gargle for relaxation of the uvula.

K. is employed to a considerable extent in the E. Indies as a cotton dye, giving to the cotton the yellowish brown color known as nankeen.

KINOLOGY, n. *kī-nōl'o-jī* [Gr. *kineō*, I move; *logos*, a discourse]: branch of physics which treats of the laws of motion.

KINOSTERNON, n. *kī-no-stēr'nōn* [Gr. *kineō*, I move; *sternon*, the breast]: in *zool.*, a genus of *Emydes* (river and marsh tortoises). *K. Pennsylvanicum* is the Pennsylvania terrapin.

KINROSS-SHIRE, *kīn-rōs'shēr*: after Clackmannanshire, smallest county of Scotland; between the counties of Perth and Fife; 12 m. long from e. to w., and about 10 m. in breadth; 49,812 acres, of which 30,000 are arable, 3,000 in wood, and 4,500 under water: see LOCH LEVEN. Its surface is elevated and gently undulating; its boundaries are hilly, with occasional level openings. On the n. and n.w. are the Ochil Hills; on the n.e., the Lomonds; and on the s.e. and s., Benarty and the Cleish Hills. The streams flow mostly into Loch Leven (q.v.) and issue by the river Leven. The soil is mainly light and sandy, but is clayey or a fine black loam in districts n. and w. of the loch. Excellent pasture is found on the moorlands. The climate is on the whole cold and wet. Formerly a large proportion of the county was waste land, and agricultural improvement was late. Now 62 per cent. of the total area is cultivated, and is nearly as valuable as Fife and the Lothians for agricultural purposes. The capital is the town of Kinross (pop. 1881, 1,960) which has some manufactures of wool and linens: the only other town is Milnathort. Pop. of K. (1871) 7,198; (1881) 6,697.

KINSALE, *kīn-sāl'*: municipal borough and seaport of Ireland, county of Cork, 14 m. s.s.w. of Cork, and at the head of Kinsale Harbor, which is formed by the estuary of the river Bandon. K. is connected with Cork by rail, and is much frequented by summer visitors. The harbor, which is landlocked, is about two m. long, half a m. in average breadth, and capable of containing 300 ships. K. exports agricultural produce, and imports coal, iron, and timber; its trade, however, owing to the neighborhood of Cork, is small. Valuable fisheries, estimated at £500 per week in value, are carried on in the district. On the Old Head of Kinsale, a promontory stretching s. into the Atlantic, is a lighthouse. Pop. (1871) 7,050; (1881) 5,998.

KINSFOLK, KINSMAN, KINSWOMAN: see under KIN.

KINTYRE': see CANTIRE.

KIOLEN—KIPPER.

KIOLEN, or **KJOLEN**, *kyō'len* or *chō'len*: an extensive plateau in Scandinavia (q. v.).

KIOSK, n. *kē-ōsk'* [Tur. *kiosk*; F. *kiosque*]: small ornamental pavilion, much used in Turkey and countries farther east in decoration of the tombs, ghats, dams, and other works. It consists of a dome, supported on four or more detached columns, the space under the dome being left open, like the open niches under canopies in Gothic architecture.

KIOTO, *kē-ō'to*, or **SAI-KIYO**, *sī-kē'yo* (formerly **MIAKO**, *mē-t'ko*): ancient capital of Japan, in the s. w. of the island of Nipōn. Broad and clean streets cross each other at right angles, the houses are mostly of the better class, and the whole aspect of the city is pleasant. During the double rule in Japan, it was the residence of the mikado, then only the spiritual emperor, and was and is the stronghold of the national religion. Some of the temples are of great size and splendor. In 1868, the great revolution broke out; the shogun, or temporal ruler, was deposed; and the mikado, who was then invested with complete authority, both temporal and spiritual, removed his court to Yedo. Many of the aristocratic dwellings are consequently tenantless, and the population has decreased. K. is still, however, the seat of considerable trade with the interior. It is also a centre of Japanese literature and art, and is well provided with public schools for boys and girls. It is famed for the manufacture and dyeing of silks. The former imperial palace surrounded by beautiful gardens is now a museum of Japanese arts and manufactures. K., is connected by railway with Osaka and Hiogo. Pop. (1882) 239,425.

KIOWAS, or **KIOWAYS**, *kī'o-wāz*: tribe of American Indians of the Shoshone family, noticed by Capts. Lewis and Clarke on the Paducah river, and settled by the govt. in Indian Terr. 1869. The K. and Comanche tribes together occupy a reservation of 4,639 sq. m. (2,968,893 acres), and the K. numbered 1,176 (1885). They are nomadic, warlike, and intractable.

KIP, n. *kīp* [etym. doubtful]: leather of yearlings or small cattle; a grade between calf and cowhide.

KIP, *kīp*, **WILLIAM INGRAHAM**, D.D., LL.D.: bishop of the Prot. Episc. Church: b. New York, 1811, Oct. 3. He graduated at Yale College 1831, and the General Theol. Seminary 1835, took orders in the Prot. Episc. Church 1835, was rector of St. Peter's Church, Albany, 1838-53, was then appointed missionary bp. of Cal., and was elected full bp. 1857. He has contributed much to periodical literature, and published numerous religious and historical works. He received the degree D.D. from Columbia College 1847 and LL.D. from Yale Univ. 1872.

KIPPER, n. *kīp'ér* [Icel. *keppr*, a hill, a protuberance, a knob—the jaw of the salmon after spawning time is said to become hooked: comp. Dut. *kippen*, to hatch; Icel. *kippa*, to pull, to snatch]: a salmon after spawning—and as

KIPTCHAK—KIRBY.

they were unfit to be eaten fresh in this state, they were cured; hence a salmon split open and cured: V. to prepare or cure fish for keeping. KIPPERING, imp. KIPPERED, pp. -*pérđ*, split open, salted, seasoned, and smoked for keeping—applied to fish, as *kippered* salmon or herring. KIPPER-NOSE, in *Scot.*, a beaked or hooked nose.

KIPTCHAK, *kíp-chák'*, or KAPTCHAK, *káp-chák'*: in the middle ages, the vast territory n. of the Caspian Sea from the Don to Turkestan, occupied by the Kumans and Polovises. This tract formed one of the four empires into which the huge dominion of Genghis Khan was divided, and was the portion of his eldest son Jûjy, under whose son and successor, Batû Khan, it became the terror of w. Europe, and held Russia in iron subjection from 1236-62. Batû also conquered Bulgaria, and invaded Hungary, Austria, and e. Germany, though making there no permanent conquests. This extensive empire was dismembered toward the end of the 15th c., and gave rise to the khanats of Kazan, Astrakhan, and Krim-Tartary. Parts of the region were annexed to Russia. The Tartars or Mongols of K. were known also as the 'Golden Horde.' Ruins of villages are in many places, especially near the Volga, and have been visited and described by Pallas, Klaproth, Göbel, etc. They no doubt belong partly to the era of the K. empire, but many are more ancient.

KIRÂTÂRJUNÎYA: one of the celebrated poems of Sanskrit literature. Its author is Bhâravi, its principal subject the conflict of *Arjuna* with the god Siva in his disguise of a *Kirâta*, or mountaineer.

KIRBY, *kér'bî*, EDMUND: 1840-1863, May 28; b. Brownville, N. Y.: soldier. He graduated at the U. S. Milit. Acad. 1861; entered the army as 2d lieut. of artillery; drilled newly-arrived volunteers at Washington till the army was organized; was promoted 1st lieut. and assigned to Ricketts's battery 1861, May 14; and succeeded to its command on the capture of Capt. Ricketts in the first Bull Run battle. He commanded his battery at Ball's Bluff, 1861, Oct.; at Yorktown, Fair Oaks, Savage Station, Glendale, and Malvern Hill in the peninsular campaign 1862; and at Fredericksburg and Chancellorsville in the Rappahannock campaign 1863. He was mortally wounded at Chancellorsville, and was promoted brig.gen. of vols. while on his death-bed for distinguished bravery in action.

KIRBY, *kér'bî*, WILLIAM: English clergyman and entomologist: 1759, Sep. 19-1850, July 4; b. Winesham Hall, Suffolk. He was educated at Caius College, Cambridge, and appointed to the curacy of Barham, which he held 14 years, when he became the rector and held that office till his death. His principal works are *Monographia Apum Angliæ* (Ipswich 1802), and *Introduction to Entomology* (4 vols. 1817-26), published jointly with Mr. Spence. The first was very favorably received both at home and abroad, and at once secured for K. a distinguished place among European savants. The second work is in the form of

KIRCHENTAG—KIRGHIS.

letters, and was and still is remarkably popular. K. also contributed a variety of very important entomological papers to the Linnæan Transactions. His greatest discovery in this department of science is that of the genus *Stylops*—type of a new order of insects, living for a time parasitically in the bodies of bees. He also wrote one of the Bridge-water Treatises, *Habits and Instincts of Animals*. K. was one of the first members of the Linnæan Soc. (founded 1788), honorary pres. of the Entom. Soc., and fellow of the Royal and Geol. Societies.—See *Life* by the Rev. John Freeman (1852).

KIRCHENTAG, *kēr'chèn-tág*: association of ministers and laymen of the Lutheran, German Reformed, United Evangelical, and Moravian churches in Germany, for promotion of the interests of religion, without reference to their denominational differences. It holds an annual meeting, the place of which is changed from year to year. The first meeting, 1848, was at Wittenberg, in the church to which Luther affixed his theses. Its discussions and resolutions have had considerable influence in Germany.

KIRCHHEIM, *kēr'ch'hīm*: town of Würtemberg, 15 m. s.e. from Stuttgart. Pop. (1880) 6,587, nearly all Protestants.

KIRCHHOFF, *kīrch'hof*, GUSTAV ROBERT: scientist: b. Königsberg, 1824, Mar. 12. He graduated at Königsberg Univ. 1846; became a lecturer on mathematical physics in Berlin 1848, lecturer on experimental physics in Breslau, 1850, and prof. of nat. philosophy at Heidelberg Univ. 1854; and was appointed prof. of nat. philosophy in the Univ. of Berlin, and elected a member of the Acad. 1875. He has made important researches in electricity, elasticity, magnetism, and the tension of vapors; but is best known for his ingenious discovery in conjunction with R. W. Bunsen of the spectroscope and its application for spectrum analyses.

KIRGHIS, *kīr-gēz'*, or KIRGHIS-KAISAKI, *kīr-gēz'kī-zák'ē*, or COSSACKS OF THE STEPPES: a people spread over the immense territory bounded by the Volga, desert of Obsh-tchei (55° n. lat.), the Irtysh, Chinese Turkestan, Ala-Tau Mountains, the Sir-Daria, and Aral, and Caspian Seas. A few tribes of Kalmucks also live within these boundaries. This vast tract presents a dismal monotony; the country has scarcely any important elevation or depression, no important river runs through it, no great forest breaks the uniform scene; it is a vast steppe, containing 850,000 English sq. m., sterile, stony, streamless, covered with rank herbage five ft. high. It abounds in lakes and marshes, the water of which is generally brackish and unserviceable, and in the s. portion is the Kara-Kum, an extensive salt desert.—The K. are a Turkish race, and speak the dialect of the Uzbeks, from whom they profess to be descended. They have, from time immemorial, been divided into the *Great, Middle, and Little Hordes*. The first of these wander in the s.w. portion of the Russian steppe, partly in the Russian possessions n. of the Ala-Tau and Khokan, partly

KIRIN—KIRK.

in the territory of China. They are subject to the rulers within whose bounds they dwell. The Middle Horde possess the territory (called the *country of the Siberian Kirghises*) between the Ishim, Irtysh, Lake Balkhash, Khokan, and the territory of the Little Horde; also a great portion of the Russian province of Semipalatinsk. Russia has gradually absorbed them, the result being finally achieved by the victory over Khiva 1873, and the formation of the new province of Amu Daria. The Little Horde (now more numerous than the other two together) ranged over the country bounded by the Ural, Tobol Siberian K., and Turkestan. Like the Middle Horde, they are claimed as subjects of the czar, though completely independent. This horde is partly agricultural, partly nomad. A small offshoot of the Little Horde has, since 1801, wandered between the Volga and the Ural river, and has been under rule of the governor of Astrakhan. S. of Lake Issikul, is a wild mountain tribe, the *Diko-Kamennaja*, the only tribe which calls itself Kirghis. They are called by their neighbors Kara-K., or Black K., and are of Mandshûr stock. All of them are now subject to Russia. Their collective numbers are estimated at more than 1,250,000, more than half of whom belong to the Little Horde.

KIRIN, *kîr'in*, or GIRIN, *gir'in* (Chinese *Chwen-Chang*, Naval Yard): chief town of the Chinese province of K. or Central Manchuria; on the left bank of the Girin-ula or Sangari, here 900 ft. wide. Here the emperor built his vessels for the transport of troops in the war with the Eleuts. The chief trade is in tobacco, of the kind known as 'Manchu leaf,' which is grown in the province of K. and much esteemed throughout the empire. The situation of K. is beautiful, at the foot of the Lau-Ye-Ling Mountains, but the city is irregularly built. The great province of K. has about 200,000 sq. m.; pop. about 500,000.—Pop. of the town of K. about 120,000.

KIRK, n. *kêrk* [AS. *cýrc*, or *cýrice*; Ger. *kirche*; Dan. *kerk*, or *kirke*; Icel. *kirkja*, a church (see CHURCH)]: the Church of Scotland as distinguished from other Reformed Churches, or from the R. Cath. Chh.; a place of worship; a church. *Note*.—KIRK may be referred also to F. *cirque*—from L. *circus*, a circle; W. *cyrch*, a centre, a circle. It is said, also, that people used to say in England in the 9th and 10th c., when going to church, *ad crucem*, i.e., 'to the cross,' or, as the former phrase for which it was substituted might have been translated, 'to the stones' or 'circle of stones'; indeed, the primary sense of *kirk* and *church* had no connection with Christian worship. The terms *kirk* and *church*, and *ad crucem* if ever in use, are spellings merely in accommodating a previously existing heathen word or phrase to a new Christian etymology and meaning. The derivation of *kirk* from L. *quercus*, an oak, is incorrect.

KIRK, *kêrk*, EDWARD NORRIS, D.D.: 1802, Aug. 14—1874, Mar. 27; b. New York. He graduated at Princeton College 1820, and at Princeton Theol. Sem. 1825; was pastor of a new church in Albany, the Fourth Presb., 1829–37;

KIRK—KIRKCALDY.

travelling sec. (in Europe) of the American and Foreign Evangelical Soc. 1837-42; pastor of Mt. Vernon Church (Congl.), Boston, 1842-71. In 1856 as agent of the Amer. and Foreign Christian Union, he spent some time in Paris preaching and gathering Prot. congregations. He was an earnest promoter of evangelical work in Rom. Cath. countries of Europe. In his last years he was nearly blind, but still active in Christian work. He published several translations of theological works from the French. As a pastor he was laborious and faithful; as a preacher he was noted for fervor and earnestness, and attracted large audiences, gaining great numbers of converts.

KIRK, *kèrk*, JOHN FOSTER: historian: b. Fredericton, N. B., 1824, Mar. 22. He removed to Boston 1842, was sec. to William H. Prescott 1847-59, was editor of *Lippincott's Magazine*, Philadelphia, 1870-86; and was appointed lecturer on European history in the Univ. of Penn. 1886. He aided Prescott in his historical work, contributed to the *North American Review* and the *Atlantic Monthly*, published *History of Charles the Bold*, 3 vols. (Philadelphia and London 1863-68), and edited the complete works of William H. Prescott (1870-74).

KIRKBRIDE, *kèrk'brìd*, THOMAS STORY, M.D., LL.D.: 1809, July 31—1883, Dec. 16; b. Morrisville, Bucks co., Penn.: physician. He was educated in the schools of the Soc. of Friends; graduated at the medical dept. of the Univ. of Penn. 1832; was appointed the same year resident physician of the Friends' Asylum for the Insane, Frankfort, Penn.; was in charge of the newly established insane ward in the Penn. hospital (the first in the country) 1833-5; in private practice 1835-40; and was then elected supt. of the new Penn. hospital for the insane, holding the office at his death. He was member of numerous medical societies in Europe and America; was an authority on mental alienations, the treatment of the insane, and management of insane institutions; and published a large number of reports and treatises on his specialty. He received the degree LL.D. from the Univ. of Penn. 1874.

KIRKCALDY, *kèr-kaw'đĩ* or *kèr kaw'đĩ*: royal and parliamentary burgh, seaport, and market-town in the county of Fife, Scotland, a place of growing commercial importance. Including the suburbs of Linktown and Newtown of Abbotshall on the w., and Pathhead, St. Clairtown, and Gallatown on the n.e., it is three m. in length; hence the name 'Lang Toun.' Its harbor is commodious. Its manufactures are spinning flax, tow, and jute, and bleaching and weaving linen yarns, the products being the usual varieties of linen cloth; mechanical (including marine) engineering on a great scale; iron-founding; brewing; and tanning. There are also several potteries. The manufacture of floor-cloth and wax-cloth has been recently developed into a great trade, and K. is the chief seat of this important manufacture. There is ample supply of water by gravitation. In 1880, 2,887 vessels, of 409,168 tons, entered, and 2,917, of 416,570 tons, cleared the port. Pop. of

KIRKCUDBRIGHTSHIRE—KIRKDALE CAVE.

parl. burgh (1871) 12,422; (1881) 13,320; of entire town, 23,315. K. is the birthplace of the author of the *Wealth of Nations*; and Edward Irving and Thomas Carlyle were teachers here.

KIRKCUDBRIGHTSHIRE, *kér-kó'brē-shér* (properly the Stewartry of Kirkcudbright): county in Scotland, comprehending the e. district of Galloway, bounded n. and n.e. by the counties of Ayr and Dumfries, e. and s. by the Solway Firth and the Irish Sea, w. by the county of Wigtown. Its length e. to w. is 45 to 50 m., its breadth about 40 m.; 954 sq. m., or 610,734 acres, of which 184,761 acres are under rotation of crops and grass. The rest is composed of hilly and mossy ground, and lakes, of which there is one in almost every parish. Among the hills are Meyrick, 2,764 ft.; Cairnsmore, 2,597 ft.; and Criffel 1,867 ft. There are several considerable rivers, the principal of which are the Cree and the Dee; the Dee is navigable for two m. above Kirkcudbright.

There are more than 400 landowners, many of whom possess small bounds, and farm their own land. One-half of the land is under entail. The occupants number 1,377. The valued rent for 1674 was £9,549. The valuation for 1881-2 (exclusive of royal burghs) was £366,139; that of railways was £29,475. In 1881 the total acreage under all kinds of crops, bare and fallow grass, was 179,237; under corn crops, 32,349; under green crops, 18,091. The soil of the county is principally of a thin mold, or a brownish loam mixed with sand, lying above rock and gravel. The condition of the rural inhabitants, and the agriculture till almost the end of last century, were very primitive; the principal food of the people in the early part of the century, was kail, and oats ground in querns turned by the hand, and dried in a pot; but husbandry has been improved of late, and great attention is being given to the rearing of cattle. Principal towns, Kirkcudbright, the county-town, pop. (1881) 2,571; New Galloway, Creetown, Gatehouse, Castle-Douglas, etc. Before the Reformation, the stewartry possessed more monasteries than any other county of Scotland. There have been a few eminent men of letters connected with this county, of whom the most celebrated were Dr. Alexander Murray, the linguist, and Dr. Thomas Brown. The constituency numbered (1881, 2), 2,248, who return one member to parliament: pop. (1881) 42,088.

KIRKDALE CAVE, *kérk'dāl*: near Kirkdale Church, in the vale of Pickering, Yorkshire; famous for numerous remains of Tertiary mammals. It was discovered 1821, in the cutting back of an oolitic limestone rock in which it is situated. It was examined by Buckland, and fully described by him in *Reliquiæ Diluvianæ*. Its greatest length is stated at 245 ft., and its height generally is said to be so small that there are only two or three places where a man can stand erect. The fossil bones are in a deposit of mud on the floor of the cave: this is covered by stalagmite formed by the water highly charged with carbonate

KIRKE—KIRKLAND.

of lime dropping from the roof. Remains have been discovered of the hyena, tiger, bear, wolf, weasel, elephant, rhinoceros, hippopotamus, horse, ox, deer, hare, rabbit, water-rat, raven, pigeon, lark, and duck.

KIRKE, *kérk*, Sir **DAVID**: 1596–1656; b. Dieppe, France: colonist. He was the son of an English merchant in Dieppe; removed to England during the Huguenot persecutions; with two brothers commanded an expedition to break up the French settlements in Canada and Nova Scotia 1627; blockaded Quebec and captured a French squadron sent to relieve it 1628; compelled Champlain to surrender the city, and reduced Nova Scotia, 1629; was knighted 1633; and soon afterward received a grant of Newfoundland, which he colonized, and governed for 20 years, when Cromwell dispossessed him. Quebec and Nova Scotia were surrendered by England to France, and K. recovered a part of his Newfoundland property by bribing Cromwell's son-in-law.

KIRKHAM, *kérk'am*: market-town of England, county of Lancaster, on a small tributary of the estuary of the Ribble, 8½ m. w.n.w. of Preston. Sail-cloth, sacking, cordage, and cotton fabrics are manufactured. Pop. (1881) 3,840.

KIRKINTILLOCH, *kérk-in-tíl löch*: burgh of barony and market-town in Dumbartonshire, Scotland, on the Forth and Clyde canal, about six m. n.n.e. of Glasgow. It had its origin in a fort on Antoninus' Wall, and is said to have been called at first *Caerpentulach* (the fort at the end of the ridge), of which its present name is supposed a corruption. It became a burgh of barony in the time of William the Lion. Hats and cotton cloths are manufactured here, and there are bleaching and printing works, collieries, iron-stone mines, and quarries. Pop. (1871) 6,490; (1881) 8,029.

KIRK-KILISSIA, *kérk-kē-lis'si a* ('forty churches'): town of European Turkey, in the vilayet of Adrianople, 104 m. n.w. of Constantinople, with which it has a brisk trade in butter and cheese. Pop. 14,000 (many Jews).

KIRKLAND, *kérk'land*, **JOHN THORNTON**, D.D., LL.D.: 1770, Aug. 17—1840, Apr. 24; b. Herkimer, N. Y.: educator. He graduated at Harvard College 1786; was tutor in metaphysics there while studying theol.; was installed pastor of the New South Church (Congl.), Boston, 1794; pres. Harvard College 1810–28; contributed to the periodicals of the day; and published *Eulogy on Washington* (1799), *Biography of Fisher Ames* (1809), and *Discourse on the Death of Hon. George Cabot* (1823). He received the degree D.D. from Princeton Seminary 1802, and LL.D. from Brown Univ. 1810.

KIRK'LAND, **SAMUEL**: 1744, Dec. 1—1808, Feb. 28; b. Norwich, Conn.: missionary. He graduated at the College of N. J. 1765; was ordained a Congl. minister 1766; went on a mission to the Six Nations of Indians; learned the Mohawk and Seneca languages; was appointed Indian missionary by the Congl. Missionary Soc.; and spent more

KIRK-ROAD—KIRKWOOD.

than 40 years among the N. Y. Indians. He was brigade chaplain to Gen. John Sullivan 1779, and to various continental armies during the remainder of the revolutionary war. In 1785 congress granted him a tract of land 2 m. sq., to which the state of N. Y. and the Indians added more 1788, and on this he founded the present town of K. He was the founder of Hamilton College.

KIRK-ROAD, *kérk'rôd*: in the law of Scotland, road used by the inhabitants of a district (generally a short cut) going to and from church. Such a right to a road, if ancient, is recognized as valid in Scotland, also in England and Ireland.

KIRK-SESSION, *kérk-sësh'un*: in Scotland, etc., the lowest court in Presbyterian churches; being the governing body of a particular congregation, and composed of the 'minister' and 'elders' of the congregation. An appeal may be taken from the K.-S. to the presbytery, and thence to the higher courts of the church. Subject to this appeal, the K.-S. exercises discipline in regard to all members of the congregation, suspending from or restoring to the *privileges* of the church; and questions of this kind must originate in the K.-S., and be primarily determined there. The functions of the K.-S. were, in former times, often inquisitorially exercised; but this is now less frequent, and the danger of it is diminishing. In former times, also, the K.-S. in Scotland often imposed fines, chiefly for offenses against the seventh commandment; but this practice had no recognition in civil nor even in ecclesiastical law, and is now relinquished. The K.-S. of the Established Church in each parish is fully recognized in Scottish law as having certain rights and duties with respect to the poor, though recent legislation has very much deprived it of its former importance in this relation.

KIRKWALL, *kérk'wawl*: royal and municipal burgh, seaport, and market-town of Scotland, cap. of the county of Orkney: on the n.e. coast of Mainland, about 26 m. n.n.e. of John O'Groat's House. Its chief building is the cathedral of St. Magnus, a fine cruciform structure, in mixed Norman and Gothic, dating from about 1138. In the choir of this cathedral, service is still held. Around it are the ruins of the King's Castle, the Earl's Palace, and the Bishop's Palace. The town has been greatly improved within recent years. Numerous shops have been established, so that the commercial transactions are now not confined to the annual fair in Aug. as formerly. The export trade, chiefly in agricultural produce, is increasing rapidly. In 1881-2 its parliamentary and municipal constituency numbered 401, and the annual value of real property was £11,063. Pop. (1871) parliamentary burgh 3,434; (1881) 3,923.

KIRKWOOD, *kérk'wúd*, DANIEL, LL. D.: mathematician: b. Harford co., Md., 1814, Sep. 27. He was educated in York County Acad., Penn.; mathematical instructor there 1838-43; principal of the Lancaster high school 1843-8; of Pottsville Acad. 1848-51; prof. of mathematics in Dela-

KIRKWOOD—KISFALUDY.

ware College 1851-4; pres. 1854-6; prof. of mathematics in Indiana Univ. 1856-66; in Washington and Jefferson College 1866-7; and since 1867 in Indiana Univ. He has published a large number of mathematical and astronomical works; is a member of numerous scientific societies; was elected a member of the American Philosophical Soc. 1851; and received the degree LL.D. from the Univ of Penn. 1852.

KIRKWOOD, SAMUEL JORDAN: lawyer: b. Harford co., Md., 1813, Dec. 20. He received a limited education; was admitted to the bar in O. 1843; was prosecuting attor. of Richland co. 1845-9; member of state constitutional convention 1850-1; removed to Io. 1855; elected state senator 1856; gov. 1859 and 61; U. S. senator (to fill vacancy) 1866; gov. 1875; and U. S. senator 1876; and was appointed by Pres. Garfield sec. of the interior 1881.

KIRMAN': see KERMAN.

KIR'MESS: see KERMESSE.

KIRN, n. *kérn*: in *Scot.*, a churn; the feast of harvest-home. KIRN-MILK, the milk left in the churn after the butter has been extracted.

KIRSANOFF, *kër-sâ-nöf'*: town of Great Russia, govt. of Tambov, lat. 52° 39' n.. long. 44° 44' e. Horses and fine fleeced sheep are reared here, common cloth is manufactured, and there are two annual fairs. Pop. (1880) 7,203.

KIRSCHWASSER, n. *kërsh-vás'ér* [Ger. cherry-water—*kirsche*, cherry; *wasser*, water]: an alcoholic liquor distilled from a variety of *Cerasus avium*, ord. *Rosacææ*, the sweet black cherry; Swiss brandy. This liqueur is highly esteemed in Germany. The cherries, gathered quite ripe, and freed from their stalks, are pounded in a wooden vessel, but so that the stones are not broken. They are then left to ferment, and when fermentation has begun, the mass is stirred two or three times a day. The stones are afterward broken, and the kernels broken and thrown in. By distillation, K. is obtained. K. is sometimes called *Cherry Brandy*, but the common cherry brandy is made by mixing brandy with the juice of cherries.

KIRTLE, n. *kért'l* [AS. *cyrtel*; Dan. *kjortel*, a garment: Icel. *kyrtill*, a kirtle, a gown]: an upper garment; a sort of petticoat; a short jacket. KIRTLED, a. *kért'ld*, wearing a kirtle. *Note*.—Skeat suggests that KIRTLE may be a dim. of Eng. *skirt*; that Icel. *kyrtill* may also be dim. of Icel. *skyrtla*, a shirt; and Dan. *kjortel*, of *skjorte*, a shirt.

KIRWANITE, n. *kér'wân-ît* [after *Kirwan* of Dublin]: a mineral of a dark olive-green color, with a radiating fibrous texture, consisting of hydrated silicates of alumina, lime, and iron—probably only a variety of *green earth*.

KISCHINEFF', or KISHENAU': see KISHINEFF.

KISFALUDY, KAROLY (CHARLES): 1790, Mar. 19—1830, Nov. 21; younger brother of Sándor K. In the development of the Hungarian theatre he was more important

KISFALUDY—KISHM.

than his brother, being regarded as the founder of the national drama. In 1817, he took up his residence in Pesth, and published in rapid succession poems, tales, dramas, and comedies, which secured the highest popularity. Of these, his comedies are by far the most valuable. The best were translated into German by Gaal (*Theatre der Magyaren*, Bonn, 1820). K. died at Pesth.—The *Kisfaludy Society*, so named in honor of the brothers, was established 1817, and has rendered important services to Hungarian literature.

KISFALUDY, *kish'föh-ló-dē*, SÁNDOR (ALEXANDER): Hungarian patriot, who exercised great influence on the development of the language and literature of his country: 1772, Sep. 22—1844, Oct. 30; b Sümegh (county of Szalad). He studied at Raab and Presburg, and after serving several years in the Austrian army, retired to his paternal estate, and applied himself to literature and farming. The first part of lyrical masterpiece, *Himfy's Szerelmei* (Himfy's Love), which appeared anonymously 1800, was received with unbounded applause. K. was spoken of as the 'Great Unknown.' On the publication of the second part 1807, the author threw aside his mask. In the same year he published his *Regék a Magyar Előidőből* (Legends of the Olden Time in Hungary), marked by depth of feeling, and by elegant simplicity of style. K. then attempted tragedy, and took Schiller as his model. Some of his historical dramas are worthy of mention, e.g. *János Hunyadi*, and *Ladislavus the Cumanian*. Some of his pieces, illustrating the family life of his countrymen, are among the best on the Hungarian stage. A complete edition of his writings appeared at Pesth, 8 vols., 1833–38. He died at Sümegh.

KISH, n. *kish*: a substance resembling plumbago produced in iron-smelting furnaces; a workman's name for graphite scales; a fish-basket.

KISHINEFF, *kish-ï-něf'*, or KICHENEV, *kish-ë-něv'* (Moldavian *Kishlanow*): town of Russia, cap. of the govt. of Bessarabia, 95 m. n.w. of Odessa, on the right bank of the Byk, a tributary of the Dniester. Until 1812, when it came into the possession of Russia, it was an unimportant place; since then it has rapidly increased in size and prosperity. It has become the centre for the whole Bessarabian trade in grain, wine, tobacco, wool, and skins. Fairs, held twice a week, are estimated to make annual returns of \$1,500,000. K. was the chief centre of the Russian invasion in the late war with Turkey. About 12,000 acres of gardens in the suburbs produce great quantities of fruit and tobacco. K. has a college, an ecclesiastical seminary, and extensive manufactures. The buildings are plain and the streets mostly unpaved. Pop. (1812) 7,000; (1838) 13,000; (1858) 85,547; (1880) 112,137, composed of Russians, Jews, Cossacks, Poles, Germans, Armenians, Bulgarians, Greeks, gypsies, and many other nationalities.

KISHM, *kishm*, or TAWILAH, Eng. 'Long Island' (ancient *Oaracta*): island of Persia, belonging to the Imaum of Muscat; at the mouth of the Persian Gulf; about 70 m. in

KISHON—KISSINGEN.

length by 12 in average breadth. It is separated from the mainland by a deep and dangerous strait, in which are several small wooded islets. K. yields in abundance grain, timber, dates, and vegetables, and supports numerous cattle. At its e. extremity is a town of the same name, capital of the island. Entire pop. estimated 5,000.

KISHON, *kish'on*: water-course in central Palestine. The stream rises near the foot of Mt. Tabor and Little Hermon, winds w. through the plain of Esdraelon, and empties into the Mediterranean at the Bay of Acre. A torrent in winter, it is dry through a large part of the year except for the few miles nearest the sea. In the rainy season it receives the rainfall from the mountains and rushes through the plain with destructive volume and speed. Thus doubtless was Sisera's host overwhelmed in it. The modern stream is called Nahr Mukutta. See Judg. iv. 7; v. 21; I K. xviii. 40; Ps. lxxx. 9.

KISS, n. *kis* [AS. *cyssan*; Ger. *küssen*; W. *cusanu*, to kiss; Skr. *kus*; Icel. *koss*, a kiss: comp. Gael. *cis*, tribute, homage]: a salute with the lips: V. to salute with the lips; to touch with the lips; to touch gently. KISS'ING, imp. KISSED, pp. *kist*. Note.—The word KISS seems to have had its origin in the practice of feudal times of expressing homage to a superior by kissing his hand, foot, or some part of the body, or in his absence some object belonging to him, as a gate or a lock—and not, as suggested by Skeat, connected with Icel. *kostr*, choice; Goth. *kustus*, a proof, a test; L. *gustus*, taste—see Dr. Mackay.

KISS, *kis*, AUGUST: distinguished German sculptor: 1802, Oct. 11—1865; b. Plesz. in Upper Silesia. He studied under Rauch at Berlin and gradually acquired high reputation, which was greatly increased on the completion, 1839, of the model of his celebrated colossal group, *Amazon attacked by a Panther*, for the execution of which in bronze, now the ornament of the Museum stairs in Berlin, the sum of 40,000 thalers was subscribed with great enthusiasm on the part of the public. Among his works are *St. Michael overthrowing the Dragon*, *A Tiger destroying a Serpent*, and a statue of Frederick the Great.

KISSING-COMFIT, n. *kis'ing-kūm'fīt* [see COMFIT]: in OE., a spiced or medicated sweetmeat for sweetening the breath.

KISSINGEN, *kis'sing-en*: town of Bavaria, Lower Franconia, celebrated for its mineral waters. It is in the valley of the Saale, 656 ft. above sea-level, 30 m. n.n e. of Würzburg, 62 m. e. of Frankfort-on-the-Main. Of its three chief springs, the *Rakoczy* and the *Pandur* furnish saline and chalybeate waters, the *Maxbrunnen* are acidulous and alkaline: the first two have temperature 51—52° F.; the last—resembling selters water—50—51°. The *Rakoczy* water has an objectionable ingredient, sulphate of lime, which is poisonous if taken internally in large quantities. A spring called the *Soolen-Sprudel* is remarkable for the periodical ebb and flow of its waters, caused apparently by the accumulation and discharge of carbonic-acid

KISTNA—KIT-CAT CLUB.

gas. The waters are both drank and used as baths by the patients, and are considered specially efficacious in cases of chronic disease, gout, rheumatism, catarrh, scrofula, etc. Mud baths, of the sediment of some of the springs, also are in use. The town is attractive, and the number of visitors annually is 10,000–12,000. Since 1848, gaming-tables have been forbidden. Near K., 1866, July 10, the Prussian army defeated the Bavarians with great carnage. Pop. (1880) 3,873.

KISTNA, *kist'na*, or KRISHNA, *krish'na*: river of the peninsula of Hindustan. It rises within 40 m. of the Arabian Sea, at a height of 4,500 ft., lat. 18° 1' n., and flowing e. and s., falls into the Bay of Bengal, after a course of 800 m. It forms a considerable delta at its mouth.

KISTVAEN, or CISTVAEN, n. *kist'vân* [W. *cist*; Gael. *ciste*, a chest, a box, and W. *maen*, a stone: Gr. *kistê*, a chest]: in *arch.*, an inclosure formed of a few large stones placed on edge with a stone cover, used as a sepulchre at some remote time: see CIST. KIST, n. *kist*, in *Scot.*, a chest or box of good construction for the safe-keeping of articles of dress, etc.

KIT, n. *kit* [Dut. *kit*, a hooped beer-can]; a large bottle; a milk-pail or tub; a wooden vessel for holding salted butter.

KIT, n. *kit* [Dut. *kudde*, a flock: Bav. *kütt*, a covey of partridges: Norw. *kitte*, a space shut off, a corn-bin: comp. Gael. *ceud* = *keut*, first, hence an article of first necessity]: a brood; a collection; a collection of travelling necessities, or of tools, as those of a soldier or workman; a soldier's stock of clothes, etc., such as shirts, boots, brushes, but not including his uniform, arms, or accoutrements; a composition of resin, pitch, or tallow.

KIT, *kit*: small narrow-bodied violin, about 16 inches long, capable of being carried in the coat pocket, and used chiefly by teachers of dancing.

KIT-CAT CLUB: famous club instituted in London 1703, consisting of noblemen, and gentlemen favorable to the succession of the House of Hanover, and whose ostensible object was the encouragement of literature and the fine arts. Jacob Tonson, an eminent publisher, was founder and secretary. The club, according to Defoe, derived its name from having met for some time in the house of Christopher Catt, a pastry-cook. The spectator (No. 9) derives the name from the pies of Christopher, known as 'Kit-kat-pies;' and another story is that the name was from an inn where the club met, with the sign of the cat and fiddle, in Gray's Inn Lane. The club was dissolved about 1720, previous to which each of the members presented his portrait (half-length figure) to Tonson, painted in a uniform size by Sir Godfrey Kneller. These interesting portraits, forty-two in number, are now in possession of W. R. Baker, Hertfordshire. The designation *Kit-Kat* is applied to a canvas for portraits of the size of those of the club, 28 or 29 by 36 inches.

KITCHEN—KITCHEN-GARDEN.

KITCHEN, n. *kich'ën* [AS. *cicen*; L. *coquina*; It. *cucina*, Ger. *küche*; Dut. *kokene*, a kitchen—from L. *coquĕrĕ*, to boil]: the room in a house where the food is cooked; in *Scot.*, anything eaten with bread as a relish, such as butter, cheese, and the like. **KITCHEN-FEE**, the fatty drippings from meat while roasting. **KITCHEN-STUFF**, refuse fat or dripping, etc. **KITCHEN-MAID**, a female servant whose duty is to attend to the work of the kitchen. **KITCHEN-RANGE**, a kitchen-grate.

KITCH'EN-GAR'DEN: garden for cultivation of culinary vegetables, or that part of a large garden specially appropriated to this use. As the crops of the K.-G. are not generally very pleasing to the eye, care is taken, if possible, that it may not be within view of the principal windows of the dwelling, or otherwise obtruded on notice. But in the selection of a situation for the kitchen-garden, regard must be had also to exposure, shelter, etc., in which it needs every advantage that can be obtained. In order to hide it from view, it should not be so surrounded with trees as to deprive it either of sunshine or of free access of air.

For general remarks applicable to the K.-G. as to soil and the preparation of it, manuring, water, gardening operations, etc., see **GARDENING**. A part of the K.-G., or a place close beside it, is always allotted to compost heaps and processes connected with them. A successful K.-G. requires constant care and labor. Many crops require frequent digging and hoeing during the period of their growth, and the ground must be kept free of weeds as perfectly as in the flower-garden itself. A rotation of crops is of as much importance as in the farm; cabbages and their congeners, potatoes, leguminous crops, etc., must not from year to year be grown on the same ground. But there are some perennial plants which occupy the same ground for years, as artichoke, asparagus, and sea-kale, and attention must be given to this in laying out the garden.

The crops cultivated depend on climate. The following are among the most important in the temperate climates: see the separate titles [capitals indicate those most generally cultivated]. The varieties of *Brassica oleracea*—**KALE**: **CABBAGE**: **COLEWORTS**: **SAVOYS**: **BRUSSELS SPROUTS**: **CAULIFLOWER**: **BROCCOLI**: **Kohl-rabi**: etc.—**POTATO**: **JERUSALEM ARTICHOKE**: **TURNIP**: **CARROT**: **PARSNIP**: **RADISH**: **RED BEET**: **Skirret**: **Salsafy**: **Scorzoner**: **BEAN**: **PEA**: **KIDNEY-BEAN**: **Scarlet-runner**: **ONION**: **LEEK**: **Garlic**, **Shallot**: **Rocambole**: **Welsh Onion**: **SPINACH**: **White Beet**: **ASPARAGUS**: **SEA-KALE**: **ARTICHOKE**: **LETTUCE**: **CRESS**: **Mustard**: **Sorrel**: **Corn-salad**: **Endive**: **CELERY**: **PARSLEY**: **HORSE-RADISH**: **RHUBARB**.

Sweet herbs are found in almost all gardens, as **Thyme**, **Lavender**, **Sage**, **Spearmint**, **Balm**, **Marjoram**, **Savory**, etc. The cultivation of the pumpkin, vegetable marrow, and all kinds of gourds, and of the melon and cucumber,—also of mushrooms whether in beds or otherwise—is regarded as belonging to the K.-G.; which also contains the houses

KITCHEN MIDDENS—KITE.

or pits employed for *forcing* both vegetables and fruits, and frequently the hothouses in which fruits are grown for culinary use.

KITCHEN MIDDENS, n. plu. *kich'ĕn-mĭd'nz* [Dan. *kjokken-moddings*; Scot. *midden*, a dunghill]: moldering shell-mounds. They are supposed to date from the neolithic age, and to be the moldering refuse heaps remaining from the feasts of pre-historic men. With the shells of mollusks and bones of fishes are found various implements, well shaped and polished. No remains of extinct animals are found, and no agricultural tools whatever. Some of these middens are of great size, about 1,000 ft. long, 200 ft. wide, 10 ft. high.

KITE, n. *kit* [AS. *cyta*; W. *cŭd* for *barcud*, a kite: Bret. *kidel*, a hawk]: a bird of prey (see below): a light frame of wood covered with paper, etc., as a toy for flight in the air; in *familiar language*, a belly; an accommodation bill. FLY THE KITE, to obtain money on worthless or accommodation bills.

KITE (*Milvus*): genus of *Falconidæ*, or a sub-family including Elanets, etc. The kites have much weaker bill and talons than the falcons and hawks, but the wings are much longer, and the tail is rather long and forked.



Kite (*Milvus vulgaris*).

Their legs are short. They are remarkable for gracefulness of flight, and power of sailing and wheeling about, or gliding in the air. A Scotch and local English name of the COMMON KITE (*M. vulgaris*), GLEAD or GLED, is believed to be from the same root with *glide*. The common K. is found in almost all parts of Europe, the n. and cen-

KITH—KITTIWAKE.

tre of Asia, and n. Africa. It is fully two ft. in length, from the tip of the bill to the tip of the tail, the plumage mostly brown, of various shades, in some parts mixed with gray. It feeds on reptiles, mice, moles, and other small quadrupeds, and the young of gallinaceous birds, searching for its prey on the ground, and often from no small elevation in the air. It sometimes catches fish. In former times, when it was much more plentiful in Britain than now, it was the scourge of poultry-yards, pouncing on young chickens. It was also the scavenger of London and other English towns, devouring the offal, as it still does in some of the towns of eastern Europe, and performing its office fearlessly even in the midst of the people. This was the case in London till the time of Henry VIII. The K.'s nest is usually in the fork of a tree in a thick wood. It is easily tamed.—A widely ranging species in N. America is the Swallow-tailed K. (*Elanoides furcatus*), a smaller bird than the common K., but with longer wings and tail and with immense power of flight.—The GOVINDA K. (*M. Govinda*) is common in India.—Other species are found in different parts of the world.

KITH, n. *kith* [AS. *cyth*, kindred; *cyðthe*, native land; AS. *cúth*; Ger. *kund*, known—from AS. *cennan*; Ger. *kennen*, to know]: kindred; acquaintance. KITH AND KIN, blood relations; friends and relations.

KITTATINY MOUNTAINS, *kit-a-tin'i*: name sometimes given to the Blue Ridge (q.v.), ranging from Ulster co., N. Y. to n. Alabama.

KITTEN, n. *kit'n*, also in *prov. Eng.*, KIT'LING, n. [Norw. *kjetla*, to bring forth young, as of cats; *kjetling*, a kitten: F. *chaton*, a young cat]: a young cat: V. to bring forth kittens. KITTING, imp. *kit'n'ing*. KITTED, pp. *kit'nd*.

KITTERY, *kit'er-i*: town in York co, Me.; at the mouth of Piscataqua river, directly opposite Portsmouth, N. H.; on the Portland Saco and Portsmouth railroad; 42 m. s.w. of Portland. It is connected with Portsmouth by bridge, and is the seat of the Portsmouth U. S. navy yard. It was settled 1623, incorporated 1647, and was the birthplace of Sir William Pepperell (q.v.). Pop. (1870) 3,333: (1880) 3,230.

KITTIWAKE, n. *kit'ti-wāk* (*Larus tridactylus*, or *L. rissa*): a species of GULL (q.v.), named from its peculiar call; interesting on account of its abundance in far northern regions, and its importance to their inhabitants. The young of the K. has dark markings in its plumage which disappear in the adult, is known on some parts of the British coast as the TARROCK, and was for some time regarded by naturalists as a distinct species. The flesh of the K. is much more pleasant than that of most gulls, and its eggs very good; it lays usually three eggs, fully two inches in length. It is found plentifully in all northern parts of the world, wherever the coast is high and rocky, migrat-

KITTLE—KITTO.

ing s. in winter, extending its range as far as the Medi-



Kittiwake (*Larus triadactylus*).

terranean and Madeira. It is found on the Caspian Sea. See GULL.

KITTLE, a. *kit'l*, or **KICKLE**, a. *kik'l* [Norw. *kita*, to tickle, to touch; *kitl*, tickling; *kitla*, to tickle, to touch a sore place: Ger. *kitzeln*, to tickle]: in *OE.* and *prov. Eng.*, ticklish; unsteady; easily moved; in *Scot.*, nice; attended with difficulty; intricate: V. in *Scot.*, to tickle. **KITTLING**, imp. *kit'l-ing*. **KITTLED**, pp. *kit'ld*.

KITTO, *kit'ō*, JOHN, D.D.: industrious English writer on biblical subjects: 1804, Dec. 4—1854, Nov. 25; b. Plymouth. In his 12th year, he lost his power of hearing, in consequence of a fall from a height of 35 ft. His father's circumstances were at this time so poor, that young K. was sent to the workhouse. Here he learned the trade of shoemaking, and was also enabled to indulge his taste for reading. In 1824, he went to Exeter to learn dentistry with a Mr. Grove, who had become interested in him at Plymouth, and encouraged his literary aspirations; and 1825 he published *Essays and Letters by John Kitto*. In the same year he was sent, by the kindness of friends, to the printing-office of the Church Missionary Soc. at Islington, to be trained for useful employment abroad. In 1829, May, he accompanied Mr. Grove and family on a tour to the East, visiting St. Petersburg, Astrakhan, the Kalmuck Tartars, the Caucasus, Armenia, Persia, and Bagdad. He returned to England 1833, and spent the rest of his life in the service of the booksellers, chiefly in that of Charles Knight, by whom he was liberally treated. He died at Cannstadt, in Würtemberg, whither he had gone for the benefit of his health. His principal works are—*The Pictorial Bible* (1838; new edition by W. and R. Chambers, 1855), *Pictorial History of Palestine* (1839–40), *History of Palestine* (1843), *The Lost Senses—Deafness and Blindness*

KITTREDGE—KIWI.

(1845), *Journal of Sacred Literature* (1848-53), and *Daily Bible Illustrations* (1849-53). He also edited the *Cyclopedia of Biblical Literature* (published by A. and C. Black). K.'s biography has been written by Dr. J. E. Ryland (1856); a later and better biography is by Prof. Eadie of Glasgow. In 1844, the Univ. of Giessen gave him the degree D.D.

KITTREDGE, *kit'rēj*, THOMAS, M.D.: 1746, July—1818, Oct.; b. Andover, Mass.: physician. He was educated at Byfield Acad. and at Newburyport; began practicing at Andover 1768; was surgeon of Col. Frye's regt. and served in the battle of Bunker Hill 1775; and was several times member of the Mass. legislature and general council. He was an early member of the Mass. Medical Society.

KITTS, ST.: see CHRISTOPHER, SAINT: CHRISTOPHER'S, ST. (island).

KITTYSOL, n. *kit-tī-sōl'* [Sp. *quitasol*]: the Chinese paper parasol.

KIUKIANG': see KEW-KEANG-FOO.

KIUNG-CHOW-FOO, *kē-ŭng-chow-fō'*, or KIUNG-CHAU, *kē-ŭng-chow'*: city, cap. of the Chinese island of Hainan (q.v.). K. is in the n. of the island, on a river, about three m. from the sea. It is compact and well built. Its chief industrial products are scented wood, and carved articles of cocoa-nut. The river is nearly dry at low tide, and the port of the city is at its mouth. There is a large British trade: the exports which find their way to this port comprise leather, hides, skins, tallow, sugar, hemp, grass-cloth, and silk. Pop.—often stated 200,000—is by recent authorities thought to be about 100,000.

KIUSHIU, *kū-shū'*, or KIUSIU, *kū-sū'*, or XIMO, *zē'mō'*: island of Japan, in the Pacific Ocean: lat. 31°—34° n., long. 129°—134° e.; 3d largest in the archipelago; separated from Corea by the Strait of Corea and from Nippon by the Strait of Sikokf; length 210 m.; greatest width 150 m.; 13,871 sq. m.; cap. Nagasaki. The coast is rocky and dangerous to navigation, and the interior very mountainous and with numerous active volcanos; but the valleys are fertile, well watered, and generally cultivated. The industries comprise the manufacture of paper, silk goods, and cotton cloth. K. is divided into 9 provinces—whence its name—Satsuma, Ozumi Hiuga, Higo, Hiizen, Bungo, Buzen, Chikugo, and Chikuzen; and since 1874 for administrative purposes into *ken* or prefectures, taking their names from the principal cities, as Nagasaki, Kagoshima, Kumamoto, Fukuoka, and Oita. Pop. 5,000,000.

KIVE, n. *kiv* [Dut. *kuip*, a tub]: in *Scot.* and *prov. Eng.*, a mash-vat.

KI'WI, or KI'WI-KI'WI, or KI'VI: rare New Zealand bird: see **APTERYX**.

KIZIL ARVAT—KLAMATHS.

KIZIL ARVAT, *kiz'il ár'vát*: station on the Trans-Caspian railway, in Turkestan, 44 m. w. of Sarakhs, 144 m. w. of Herat, 144 m. e. of the Caspian Sea.

KIZIL-KUM, *kiz'il kóm* (Red Sand): sandy desert in Russian Turkestan, between the Amu-Daria and Sir-Daria, stretching from the Sea of Aral to Khokan, lat. 41° — 46° $30'$ n., and long. 60° — 60° e. A continuation of this desert northward across the Sir-Daria is called **KARA-KUM** (Black Sand), and forms portion of the Kirghis Steppe.

KIZIL-TEREK, *kiz'il-tā-rěk'* (*Red River*), ancient **HALYS**: largest river in Asia Minor; rising in Pontus, flowing s.w. to the Mons Argæus, then n.e. through Galatia to the boundary of Paphlagonia, whence turning n.e. it empties into the Black Sea; length 500 m. It is scarcely anywhere navigable, and in summer is very shallow. A frequent division of Asia Minor anciently was Asia cis-Halyn and Asia trans-Halyn.

KIZLIAR, *kiz-lé-ár'*, or **KIZLYAR**, or **KIZLAR**: town in the s. of Russian Caucasia, district of Terek, about 40 m. from the mouth of the river Terek, lat. 43° $53'$ n., long. 46° $43'$ e. It contains a fortress, many vineyards, tanneries, and silkworm nurseries, and has extensive trade in wine, brandy, and fish. A model vineyard and a school for instruction in wine-making have been established here. The climate is unhealthful. Pop. (1880) 9,257.

KLAGENFURT, *klá'ghén-fórt*: town of Austria, cap. of the duchy of Carinthia, on the river Glau, two m. e. of the *Wörthsee*, with which it is connected by a canal, and about 80 m. n.n.e. of Trieste. It is the seat of the Prince-bishop of Gurk, and has a library of 50,000 vols. K. has a white-lead factory—the largest in Austria—and manufactures woolen, silk, and cotton fabrics. An active transit trade is here carried on. Here the Hungarian general Görgei was confined some years after his surrender to the Russians at Világos 1849. Pop. (1880) 18,747.

KLAMATH, *klām'at*, **RIVER**: outlet of Lower K. Lake in Jackson co., Or., at the base of the Cascade range. It flows s.w. into Siskiyou co., Cal., intersects Del Norte co., continues s.w. to Trinity river, then turns sharply n.w., and empties into the Pacific Ocean about lat. 41° $30'$ n., after a total course of about 275 m. It passes through a uniformly mountainous region and a deep and narrow cañon, abounds in salmon and other choice fish, has a number of rich gold diggings on its banks, and is navigable by steamers 40 m., though its mouth has a dangerous bar.

KLAMATHS, *klām'ats*: tribe of American Indians belonging to the n. Cal. group, known among themselves as *Iutunami*, and occupying several reservations near the Klamath lakes and the Klamath and Rogue rivers in s. Or. and n. Cal. The Klamath family proper includes also the Modocs, Shastas, Eurocs, Cahrocs, Hoopahs, Weeyots, Pitt River, Rogue River, and several smaller bands, to all of whom the name of Digger Indians has been applied in

KLAPKA—KLAPROTH.

contempt. But the real K. tribe are far superior to the other members of the family; are peacefully inclined; tall, muscular, and well-made; thrifty, ingenious, and fond of trading; but withal superstitious, given to gambling, polygamous, and of low moral tone. In 1864 they ceded all their lands to the U. S. govt. excepting a tract of 1,200 sq. m. near the Klamath lakes. In 1884 there were 213 in Cal. and 1,023 in Oregon.

KLAPKA, *kláp'kòh*, GYORGY (GEORGE): one of the most heroic and skilful generals of the Hungarian war: b. 1820, Apr. 7; son of the burgomaster of Temesvar. In 1838, he entered the Austrian army, and had attained the rank of lieut.col. when the revolution of 1848 burst out. K. instantly placed himself at the service of the Hungarian govt., and was prominent throughout the struggle. The plan of the Hungarian campaign in the opening of 1849, which was carried out with such great success, was K's work. In several of the battles, the fortune of the day was decided by the troops under his command. But the crowning glory of his patriotic career was his defense of Comorn (q.v.), at the close of the revolution. His famous sally, Aug. 5, was perhaps the most splendid deed of arms in the whole war. The Austrian army besieging the fortress was utterly routed, losing 30 pieces of artillery, 3,000 muskets, vast quantities of provisions, and about 2,000 head of cattle. K. was prepared to carry the war into Austria or Styria, but the news of the surrender of Görgei, and the flight of Kossuth, paralyzed his action. He held out, however, until Sep. 27, when he capitulated to Gen. Haynau, on condition that the garrison should retain their lives and liberties. K. then went to England, and afterward to Genoa. In 1859, he was requested by the Sardinian govt. to form a Hungarian Legion in the war against Austria, but the peace of Villafranca destroyed his hopes of active service. He has written, among other works, *The National War in Hungary and Transylvania* (1851), one of the best works on the subject; and *The War in the East*, etc. (1855). K's judicious proclamation 1862, when Garibaldi made a rash and unfortunate attempt on Rome, kept Hungarian fighters at home. In 1866, after the defeat of Austria at Königgrätz, he endeavored to effect a revolution in Hungary; but failed, and fled to Oderberg. In 1873 he undertook the reorganization of the Turkish army.

KLAPROTH, *kláp'ròt*, HEINRICH JULIUS VON: 1783, Oct. 11—1835, Aug. 23; b. Berlin; son of Martin Heinrich K. (1743–1817, distinguished analytical chemist). He studied the Chinese language, when only 14 years of age, and 1801 entered the Univ. of Halle. Here he published his *Asiatischer Magazine*, which gave him high reputation. Having gone to Russia 1805, he was appointed interpreter to the Russian embassy to China. The embassy entering Mongolia, was ordered by the Chinese emperor to return, but K. took the opportunity of exploring Siberia. He was soon dispatched on a scientific mission to the Caucasus: the results are in his *Reise in den Kaukasus und Georgien*

KLATTAU—KLAUSTHAL.

in den J. 1807 und 1808 (2 vols. Halle 1812-14; French, with numerous additions, Paris 1823). Finally in 1815 he settled at Paris, where he died. K.'s literary activity, especially after 1815, was prodigious; yet it was strangely accompanied by an excessive love of pleasure, for the gratification of which Paris afforded him too many facilities. His writings relate to the languages and history of the East, more particularly of China, and to the geography of the Russian empire; they are marked by immense learning and extraordinary acuteness, but are blemished by venturesome hypotheses, and by virulent attacks on other scholars: much of his work is now superseded. Among his books are *Geographisch-historische Beschreibung des Oestlichen Kaukasus* (Weim. 1814); *Beschreibung der Russ. Provinzen zwischen dem Kaspisee und Schwarzen Meere* (Berl. 1814); *Verzeichniss der Chines. und Mandschuischen Bücher und Manuscripte der Königl. Bibliothek in Berlin*, (Paris 1822); *Asia Polyglotta* (with tables, 1823; 2d edit., Paris 1829, with a life of Buddha according to the Mongolian legends, a work in which the various Asiatic nations are classified according to the affinities of their languages, and the beginning of their authentic history is determined; *Tableaux historiques de l'Asie depuis la Monarchie de Cyrus jusqu'à nos jours* (4 vols. Paris 1824-26, with 24 maps); *Mémoires relatifs à l'Asie* (Paris 1834); *Collections d'Antiquités Egyptiennes* (Paris 1829); *Examen Critique des Travaux de M. Champollion jeune sur les Hiéroglyphes* (Paris 1832); *Notice d'une Mappemonde et d'une Cosmographie Chinoises publiées en Chine, l'une en 1730, l'autre en 1793* (Paris 1833).

KLATTAU, *klát'tow* (Bohem. *Klatovy*): town of Bohemia, in a fertile district, 68 m. s.w. of Prague. It contains a castle and gymnasium, and carries on manufactures of woolen cloth and leather. Pop. (1880) 8,986.

KLAUSENBURG, or **CLAUSENBURG**, *klow'zén-bórg* (Hungarian *Kolozsvár*, *kō-lōzh-vár'*): one of the chief cities in Transylvania, on the Little Szamos, 80 m. e.s.e. of Grosswardein. It is surrounded by old walls, and is divided into the old and the new town. Among its public buildings are a university, a lyceum, a gymnasium, several hospitals and other institutions, benevolent and educational. Woolens, earthenware, and paper are manufactured. The trade is not important. Pop. (1880) 29,923, mostly Magyars.

KLAUSTHAL, or **CLAUSTHAL**, *klows'tál*: celebrated mining-town of Hanover, on a bleak plateau of the Upper Harz, 25 m. n.e. of Göttingen; 1,792 ft. above sea-level. The potato is the chief crop that can be cultivated here with success, and the inhabitants find their principal employment in the mines and foundries. The ores raised are silver, lead, zinc, copper, and iron: 2,000 workmen are employed in the mines, 1,000 in the foundries. American as well as German silver ore is worked. Zellerfeld, divided from K. by a brook, also is a mining centre. Although the arrangements and appointments of the mines are complete, their product has greatly declined. They have become the property of the Prussian government, and are managed for it. Pop. (1880) including Zellerfeld, 13,397.

KLEBER—KLENZE.

KLEBER, *klē'bēr*, F. *klā-bēr'*, **JEAN BAPTISTE**: distinguished general of the French Republic: 1753 or 4—1800, June 14; b. Strasburg, where his father was a garden-laborer. Having received a good education, he entered the Austrian army, but returned to France, and embracing the cause of the Revolution, rapidly rose to high military rank. He accompanied Bonaparte to Egypt as a general of division, was dangerously wounded at the capture of Alexandria, but recovered so as to take part in the expedition to Syria, and won the battle of Mt. Tabor. When Bonaparte left Egypt, he intrusted the chief command there to K., who concluded a convention with Commodore Sidney Smith for its evacuation; but on Admiral Keith's refusal to ratify this convention, K. adopted the bold resolution of reconquering Egypt, and with 10,000 men destroyed the Turkish army of 60,000 at Heliopolis. During an attempt to conclude a treaty with the Turks, K. was assassinated by a Turkish fanatic at Cairo.

KLEENE BOC, *klēn'bōk* (Dutch, little goat), or **CAPE GUEVEL**, *kāp gwā-vā'ē* (*Antilope perpusilla* or *pygmæa*, or *Cephalopus pygmæa*): species of very small antelope, very plentiful in s. Africa. It is only about 2 inches high at



Kleene Boc (*Antilope perpusilla*).

the shoulder; the limbs are slender, the head long and pointed, the horns very short; the color slaty brown. It lives singly or in pairs. in bushy districts, and is very nimble and active. Similar species are found in w. Africa.

KLEISTOGAMOUS, a. *klīs-tōg'ā-mūs* [Gr. *kleistos*, closed; *gamos*, marriage]: in *bot.*, having the fertilization effected in closed flowers, as certain grasses.

KLENZE, *klēn'tséh*, **LEO**, Chevalier von: distinguished German architect: 1784—1864; b. in the principality of Hildesheim. He studied architecture in Berlin and Paris, was appointed architect to King Jerome of Westphalia 1808; held a similar position at the court of Bavaria 1815—39, and was raised to the rank of hereditary nobility in that kingdom 1833. In 1834, he was sent to Athens, to

KLEPHTS—KLEPTOMANIA.

superintend the reconstruction of that capital, and 1839 went to St. Petersburg, to execute works for the emperor of Russia. Many of the finest buildings of the present century on the continent of Europe are monuments of K.'s genius; e.g. the Glyptothek, the Pinakothek, the Walhalla, and many other structures in Munich, and the Imperial Museum at St. Petersburg. K. wrote several works.

KLEPHTS, *klēfts*: Greek brigands: see ARMATOLES.

KLEPTOMANIA, n. *klēp'tō-mā'nī-ă* [Gr. *kleptēs*, a thief. *manīā*, madness]: a morbid impulse or desire to steal; KLEP'TOMA'NIAC, n. *-nī-ăk*, one who has a morbid impulse to steal.—Among the ordinary phenomena of minds that are not regarded as insane or criminal are observed inordinate tendencies to acquire, to collect, to hoard. So long as such an impulse does not interfere with the rights and property of others, or involve flagrant breach of law, is readily admitted as an indication of disease, or as an absurdity and eccentricity which may consign the individual to an asylum, but concerns no one else. But whenever the amount of the object appropriated, or the circumstances under which it is purloined, bring the matter into a court of law, the act is treated as theft, and punished. In many cases, however, such conduct is the obvious result of disease. The inclination to steal is a premonitory indication of many forms of mental disorder: it is a characteristic symptom of many others, where violence, or delusions, or incoherence, leave no doubt as to its source. But in other cases the morbid origin cannot be demonstrated—where the mind is clear and cogent, the morals pure, and where theft is the only proof of insanity. There is evidence, however, in favor of the opinion, that the propensity to acquire may become so irresistible, and the will so impotent, that the appropriation is involuntary, and the perpetrator irresponsible. The gratification of the impulse is found associated with physical changes and conditions regarded as incompatible with the healthy discharge of the functions of the nervous system; but the connection is not invariable, and the best mode of establishing the reality of such a disease is to consider marked cases in relation to the character, interests, and previous deportment of the individual—to the nature of the articles taken—and to the motives which seem to have determined the action. An English baronet of large fortune stole, on the continent of Europe, pieces of old iron and of broken crockery, and in such quantities, that tons of these collections were presented to the custom-house officers. A clergyman of respectable bearing and great usefulness abstracted from book-shops and stalls hundreds of copies of the Bible, perhaps with the intention of distribution. A physician pocketed some small object whenever he entered the apartment of a patient; another physician stole nothing but table-cloths. Such incongruities point to deep-seated unhealth. Although each case must be tested on its own merits, there are various features, common to a number of even doubtful cases, which should be embraced wherever a judg-

KLIAZMA—KLIPSPRINGER.

ment is formed. The objects are often stolen ostentatiously, or without any adequate precautions to conceal the attempt; they are of no value in themselves, or useless to the thief; the act is solitary, independent, without motive, and promptly and spontaneously avowed, and, if overlooked, repeated. The article acquired is restored or altogether disregarded; and though money is rarely taken, bright and colored objects usually excite cupidity. The tendency is observed in extreme youth; it is associated with pregnancy; it is hereditary; and often follows affections of the brain, and those critical and crucial changes in disposition explicable only on the supposition of corresponding alterations in the organization.—*A Manual of Psychological Medicine*, by Drs. Bucknell and Tuke, pp. 224 *et seq.*; *Ann. Med. Psychol.*, t. v. p. 666 (1853).

KLIAZMA, *klē-āz'ma*, RIVER: in Russia, affluent of the Oka, rising in the govt. of Moscow, flowing e. through Vladimir and Nijni-Novgorod, and joining the main stream near the town of Gorbatof, after a course of 327 m., for the last 150 of which it is navigable. Passing through the most industrial govts. of Russia, it is one of the principal commercial arteries of the empire.

KLICK, n. *klīk*: another spelling of **CLICK**, which see.

KLIEFOTH, *klē'fōt*, THEODOR FRIEDRICH DETLEV, D.D.: Lutheran theologian; b. Kōrchow, Mecklenburg, 1810, Jan. 18. He was tutor of Duke Wilhelm of Mecklenburg and of Grand Duke Friedrich Franz of Mecklenburg-Schwerin; was appointed supt. of the diocese of Schwerin 1840, and has been chief ecclesiastical councillor and member of the ecclesiastical upper court of Mecklenburg-Schwerin since 1850. His numerous publications include *Liturgische Abhandlungen*, 8 vols. (1854–61), and commentaries on *Zechariah* (1861), *Ezekiel* (1864–5), *Daniel* (1868), and *Revelation* (1874).

KLINKET, *klīngk'ēt*: term in fortification, signifying a small postern or gate in a palisade.

KLIP, n. *klīp* [Dut.]: in *s. Africa*, a stone. **KLIP SPRUIT**, *sprō'it* [Dut.]: a stony stream.



Klipspringer (*Antilope oreotragus*).

KLIPSPRINGER, *klīp'sprīng-ēr* (Dutch, cliff-springer), or **KAINSI** (*Antilope oreotragus*, or *Oreotragus saltatrix*):

KLOOF—KLOPSTOCK.

species of antelope, about equal in size to the chamois, and resembling it in habits, found in the highest mountainous districts of s. Africa. It is of a yellowish-gray color, and the hair is long, and stands out from the skin as a rough fur. The legs and the general form are more robust than in most species of antelope. The flesh of the K. is particularly esteemed for food; the hair also is valued for stuffing saddles; and it has therefore become rare in localities where it was formerly common. The pinnacles and precipices in which it delights, make hunting it with dogs impossible, but to approach within rifle-shot of it is not difficult.

KLOOF, n. *klóf* [Dut. *kloof*, a crevice]: in s. Africa, a glen; a gorge or valley closed at highest end.

KLOPSTOCK, *klöp'stök*, FRIEDRICH GOTTLIEB: German poet: 1724, July 2—1803, Mar. 14; b. Quedlinburg. He went to Jena 1745, to study theology. He had resolved to write a great epic poem, and thought of Henry the Fowler as a good subject; and at Jena he composed the first cantos of his *Messiah*. In 1746, he went to Leipsic, and there became acquainted with the editors of the *Bremische Beiträge*, in which the first three cantos of the *Messiah* appeared 1748. They attracted great attention; the author was pronounced a religious poet of the highest order, and was invited to Copenhagen, on recommendation of the minister Bernstorff, and introduced to the king, whom he accompanied on his travels. In 1771, K. settled in Hamburg, with a sinecure appointment and a pension from the Danish govt., and subsequently received an honorary title and a pension from the Markgraf, afterward Grand Duke, of Baden. In 1773, the last five cantos of his *Messiah* were published at Halle. K.'s name has (rather *had*) a very high place in German literature. Whatever was the intrinsic value of his poetry, he certainly exercised a very important and beneficial influence on the national taste. The greatest of his successors, Goethe, acknowledged this, though he also expressed the opinion, that K. had become obsolete, or at least that his conception of poetry had become so. When K. began to write, the literature and social life of Germany were penetrated by French influences. A cold, correct, unimaginative spirit tyrannized over the thought and habits of the people. K. broke loose at once from this shallow despotism, and breathed the air of Freedom into German poetry. Many passages in the *Messiah* show a high order of lyrical genius, though its conception lacks unity and its style lacks precision. Odes, of which many are scarcely intelligible, tragedies—in which he introduces Hermann (q.v.) the Cherusian as a national hero—and biblical dramas, with some hymns, which still find a place in collections, constitute the remainder of K.'s poetry. His dramas are of no value. His works were collected and published in 12 vols. (Leip. 1799–1817), 18 vols. (1823–29), 9 vols. (1839). The *Messiah* has been translated both into verse and prose in English.

KNACK—KNAPP.

KNACK, n. *näck* [Ger. *knacken*, to break: Ir. *cnag*; Gael. *cnac*, a knock, a crack, a crash: W. *cnec*, a snap, a crash: comp. Gael. *gnath*, a habit, a custom]: *literally*, a quick motion; a snap; a readiness in performance; trick or dexterity in doing, as if at a snap; adroitness; a toy. **KNICK-KNACKS**, n. *nĭk'näks*, trifles or toys; articles of small value, for show, and not for use. **KNACK'ER**, n. *-ér*, a maker of knacks or toys. **TO HAVE THE KNACK OF IT**, to be able to do it well and with little trouble.

KNACKER, n. *näck'ér* [Icel. *hnakkr*, a saddle]: one whose business is to slaughter old worn-out horses, an office which seemed to have fallen to the knacker or coarse harness maker; a dealer in worn-out horses and dog's meat. **KNACKER'S YARD**, a place where worn-out horses or diseased animals are destroyed, and cut up and boiled down for their commercial products.

KNAG, n. *näg* [Dan. *knag*; Ir. *cnag*, a knob, a crack: Gael. *cnag*, a pin, a peg: W. *cnwc*, a lump, a bump: Sw. *knaglig*, rugged: It. *nocco*, any bunch or knob]: a knot in wood; a peg for things to hang on; the shoot of a deer's horn; the rugged ridge of a hill. **KNAGGY**, a. *näg'gĭ*, full of knots; rugged.

KNAP, v. *näp* [Ger. *knappen*, to crack, to gnaw: Dut. *knappen*, to snatch, to snap: Dan. *kneppe*, to snap: Gael. *cnap*, to thump]: to bite; to bread short; to make a short sharp noise. **KNAP'PING**, imp. **KNAPPED**, pp. *näpt*.

KNAP, *näp*: for **KNOB**, which see.

KNAPP, *knáp*, ALBERT: 1798-1864; b. Württemberg: German poet, author of many of the best modern German hymns. He studied theology, and became the principal clergyman in Stuttgart. K. breathed a new life into a neglected branch of poetry—the religious hymn. Many of his effusions are in the *Christoterpe*, a periodical edited by him from 1833. His *Christliche Gedichte*, 2 vols. (Stuttg. 1829; 3d edit., Basel 1843), to which a 3d. vol. was added under the title of *Neuere Gedichte* (Stuttg. 1834), were published by his friends. His later hymns are in his *Gedichte* (Stuttg. 1843). K. was distinguished equally as a hymnologist. His *Evang. Liederschatz für Kirche und Haus* (2 vols. 1837) is a valuable collection of Christian hymns of all ages, to which his *Christenlieder* (Stuttg. 1841) forms a splendid supplement. The *Bilder der Vorwelt* appeared 1862. His *Hohenstaufen* (Stuttg. 1839) is a cycle of religious poems.

KNAPP, *näp*, JACOB: 1799, Dec. 7—1874, Mar. 2; b. Otego, Otsego co., N. Y.: Bapt. revivalist. He was reared in the Prot. Episc. Church, but joined the Bapt. Church when 21 years old, and after studying in Madison Univ. was ordained to the ministry 1822. He engaged in preaching and farming in Springfield, N. Y., till 1730, when he abandoned all secular employment, removed to Watertown, N. Y., and entered upon the work of an independent 'evangelist' or revivalist. Meeting unexpected suc-

KNAPSACK—KNEAD.

cess, he enlarged his field, preached in all the large cities and towns of N. Y., and afterward visited the New England, Middle, Western, and Pacific states. He claimed to have preached 16,000 different sermons, converted more than 100,000 persons, baptized 4,000, and induced 200 young men to enter the ministry.

KNAPSACK, n. *năp'săk* [Ger. *knappsack*; Dut. *knapzak*, a provision-bag, a knapsack—from Dut. *knap*, eating; *zak*, a bag: Ger. and Dut. *knappen*, to crush, to crack, to eat (see **KNAP**): a provision-sack; a soldier's or traveller's bag of canvas or skin, carried on his back in a march or walking-tour, containing food and necessities of clothing.

KNAP'WEED: see **CENTAUREA**.

KNARESBOROUGH, *nărs'būr-rûh*: market-town in the W. Riding of Yorkshire, England, 18 m. w.n.w. of York. St. Robert's Cave, in the vicinity, is well known for the murder committed there by Eugene Aram 1745. Manufactures of linen and cotten goods are carried on here; there are also flour-mills and trade in corn. Pop. (1881) 5,000.

KNAURS, n. plu. *nawrs*, or **GNAURS**, n. plu. *nawrs* [Dut. *knarren*, to growl: Sw. *knorla*, to twist, to curl: Ger. *knorren*, a protuberance]: a hard woody lump projecting from the trunk of a tree, as in the oak, hornbeam, etc.: see **GNAUR**.

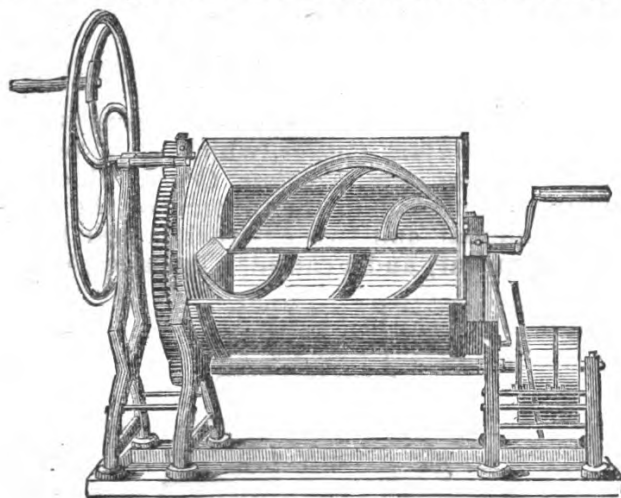
KNAVE, n. *năv* [AS. *cnapa*; Icel. *knapi*; Ger. *knabe* and *knappe*, a boy, a youth: Dut. *knegt*, a boy or servant]: *originally*, a boy or servant; a false, dishonest man; a pretty rascal; a court-card in a pack next below the queen, marked with the figure of a knave or servant. **KNAVERY**, n. *nă'ver-î*, dishonesty; petty villainy. **KNA'VISH**, a. fraudulent; given to dishonesty. **KNA'VISHLY**, ad. *-lî*. **KNA'-VISHNESS**, n. *-nês*, dishonesty.

KNAVESHIP, *năv'shîp*, in the Law of Scotland: a proportion of the grain given to the miller's servant who performs the work of the mill, such mill being an ancient mill to which a right of thirlage is attached. See **THIRLAGE**: **INSUCKEN MULTURES**.

KNEAD, v. *nêd* [AS. *cnedank* Icel. *hnodak* Dut. *kneedenk* Ger. *kneten*, to knead: Dan. *gnide*, to rub]: to work and press ingredients with the hand into a mass called dough. **KNEAD'ING**, imp.: N. the act of one who kneads. **KNEAD'ED**, pp. **KNEAD'ER**, n. *-er*, one who. **KNEADING TROUGH**, *-trôf*, a hollow vessel in which the materials of dough are worked and mixed. **KNEADING BY MACHINERY**, process in bread-making for avoiding the contact of hands with the dough, and the labor of thorough kneading. On the continent of Europe breadmaking is now conducted scientifically on a large scale by the aid of admirable machinery; and the forms of kneading-machines are very various—the general principle being, however, the same in all. In France, the preferred machine is called *Pétrisseur*. It consists of an iron cylinder, in which an axle works, and around which are set a number of curved, blunt metal

KNEE—KNEE-JOINT.

blades. The upper half of the cylinder opens for the sup-



Kneading-machine.

ply and removal of the dough. In the large bakeries, they are worked by steam-power; in the smaller ones, by hand.

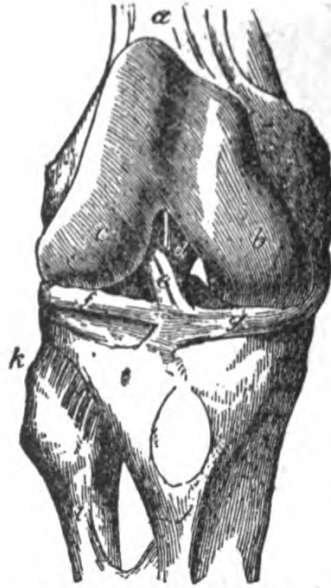
KNEE, n. *nē* [Ger. *kníe*; Icel. *kné*; Sw. *knä*; Gr. *gonu*; L. *genu*, a knee]: the joint formed at the junction of the leg and thigh (see **KNEE-JOINT, THE**): anything in the shape of the angle formed by the leg and thigh when bent or inclined to each other; in *ship-building*, angular piece of wood or iron used to connect the deck-beams with the ribs of the vessel's sides. The knees are fastened on both vertically, above and below, and horizontally, whereby great stability is imparted to the whole framework of the ship: V. 'in *OE.*, to supplicate by kneeling. **KNEE'ING**, imp. **KNEED**, pp. *nēd*: **ADJ.** having joints like the knees when bent; having prominent or abnormal knees, as *in-kneed*. **KNEE-CAP**, a capping on the knees of horses; the small round bone at the front of the knee-joint. **KNEE-DEEP**, rising to the knees; sunk to the knees. **KNEE-HOLLY**, or **KNEE-HOLM**, the plant butchers'-broom; the *Ruscus aculeatus*, ord. *Liliacæ*. **KNEE-JOINT**, see below. **KNEE-PAN**, a little round bone on the knee, slightly convex on both sides; the patella. **KNEE-RAFTER**, a rafter whose lower end or foot is crooked downwards, so that it may rest more firmly on the walls. **KNEE-TIMBER**, a natural bent piece, formed out of a tree that grows crooked. **KNEE-TRIBUTE**, homage or worship shown by kneeling; genuflection. **KNEEL**, v. *nēl* [Dan. *knæle*, to kneel, dim. of *knee*]: to bend the knee; to rest or fall on the knee or knees. **KNEEL'ING**, imp.: **ADJ.** falling or fallen on the knees: N. act of one who kneels. **KNELT**, pt. or pp. *nēlt*, or **KNEELED**, *nēld*. **KNEEL'ER**, n. *-ér*, one who kneels.

KNEE'-JOINT, THE: the articulation between the femur or thigh-bone, above, and the tibia or shin-bone, below. A third bone, the patella, or knee-cap—one of the Sesamoid Bones (q.v.), and not a true bone of the skeleton—also enters into the structure of this joint anteriorly. The articular sur-

KNEE-JOINT.

faces of these bones are covered with cartilage lined by a synovial membrane or sac, the largest and most extensive in the body, and are connected together by ligaments, some of which lie external to the joint, while others occupy its interior.

The most important of the external ligaments are the anterior or *Ligamentum Patellæ*, which is in reality that portion of the *Quadriceps Extensor Cruris* which is continued from the knee-cap to the tubercle of the tibia (see figure); one internal, and two external lateral ligaments; a posterior ligament; and a capsular ligament, which sur-



Internal view of the Right Knee-joint.
(From Gray's Human Anatomy).

a, the femur; *b* and *c*, the internal and the external condyles; *d* and *e*, the two cruciate ligaments; *f* and *g*, the external and internal semilunar cartilages; *k* and *i*, the upper part of the fibula; *j*, the upper part of the tibia.

rounds the joint in the intervals left by the preceding ligaments: the positions of these ligaments are indicated by their names. Of the internal ligaments, the two cruciate, so called because they cross one another, are the most important: their position is shown in the figure. The external and internal semilunar cartilages are usually classed among the internal ligaments; they are two crescentic plates of cartilage. The outer part of each cartilage is thick; the inner free border thin. Each cartilage covers nearly the outer two-thirds of the corresponding articular surface of the tibia, and by its form deepens these surfaces for firmer articulation with the condyles of the femur.

The chief movements of this joint are those of a hinge-joint—namely, flexion and extension; but it is capable also of slight rotatory motion when the knee is half flexed. During flexion, the articular surfaces of the tibia glide backward upon the condyles of the femur; while in exten-

KNEEL—KNELLER.

sion, they glide forward. The whole range of motion of this joint, from extreme flexion to extreme extension, is about 150°. Judging from its articular surfaces, which have comparatively little adaptation for each other, it might be inferred that this was a weak and insecure joint; yet it is very rarely dislocated. Its real strength depends on the large size of the articular ends of the bones, on the number and strength of the ligaments, and on the powerful muscles and fasciæ by which it is invested.

KNEEL: see under **KNEE**.

KNEELAND, *nē'land*, **ABNER**: 1774, Apr. 6—1844, Aug. 27; b. Gardner, Mass.: editor. He began studying theology at an early age, was ordained a Bapt. minister, soon afterward became a Universalist, and ultimately a deist. In 1821-23 he was editor of a Universalist publication in Philadelphia, 1828 edited the *Olive Branch and Christian Enquirer* in New York, and 1832 founded in Boston *The Investigator*, organ of free-thought. In 1836 he was tried in the Mass. supreme court on a charge of blasphemy in his paper. The jury failed to agree, and a second trial resulted in his conviction and sentence to a short imprisonment. There was a widely-signed protest against his prosecution, which had been instituted because of the publication of a sentence in which the wrongful insertion of a comma made him deny a belief in the existence of God. His publications include *The Deist* (1822); *Lectures on Universal Salvation* (1824); a translation of the New Test. (1823); and a *Review of the Evidences of Christianity* (1829). His writings are of no value, but his case is interesting as showing improvement in recent years in regard to liberty of speech.

KNEELAND, *nē'land*, **SAMUEL**, M.D.: naturalist: b. Boston, 1821, Aug. 1. He graduated at Harvard 1840, and at its medical school 1843; studied two years in Paris; practiced in Boston, and was demonstrator of anatomy in the Harvard Medical School, and dispensary physician 1845-50; served through the civil war as surgeon in the army, and attained the rank of lieut.col.; was instructor in the Mass. Institute of Technology 1867-9, prof. of zoology and physiology 1869-78, sec. of the corporation 1866-78, and of the faculty 1871-78; and since has applied himself to literary work, lecturing, and investigating the phenomena of earthquakes and volcanic disturbances. He edited the *Annual of Scientific Discovery* 1866-69, and has published *Science and Mechanism* (New York 1854), *The Wonders of the Yosemite Valley and of California* (Boston 1871), and *An American in Iceland* (1876).

KNELL, *n. nēl* [Sw. *knall*, explosion, loud noise; *knalla*, to make a loud noise. Norw. *gnell*, a shrill cry; Icel. *gnella*, to scream. AS. *cnyll*, a knell; *cnyllan*, to beat noisily]: the stroke or tolling of a bell; the sound of a bell or bells rung at a person's death or funeral. **KNELLING**, *n.* a sounding or tolling, as a funeral bell.

KNELLER, *nēl'er*, Ger. *knēl'ér*, **SIR GODFREY**, eminent portrait-painter: 1648, Aug. 8—1723 or 6, Nov. 7; b. Lü-

KNELT—KNIGHT.

beck, Duchy of Holstein; of an ancient family. He studied painting under Rembrandt and Ferdinand Bol. At first he chose historical subjects, but afterward applied himself entirely to portrait-painting. In 1674, he went to London, and, on the death of Sir Peter Lely 1680, was appointed court-painter to Charles II. In 1684, he visited Paris, at the invitation of Louis XIV., and painted portraits of the king and royal family. He retained his office at the English court during the reign of James II., and continued to fill it till after the Revolution. In 1692, William III. bestowed on him the honor of knighthood, which he afterward received also from Emperor Joseph I.; and in 1715, George I. made him a baronet. A monument was erected to him in Westminster Abbey, with a highly laudatory inscription by Pope. K.'s best-known productions are the *Beauties of Hampton Court* (painted by order of William III.), and his portraits of the 'Kit-Cat Club.' He painted avowedly for money, hence never did justice to his talent, so that it is difficult for posterity to understand his reputation, until it is remembered that he had no competitors of any ability, and that his period marked a decline in art from Vandyck and Lely. His coloring was brilliant, and his drawing was good; but his pictures are monotonous, and his works show little of genuine natural simplicity.

KNELT, *nělt*: pt. and pp. of KNEEL, which see.

KNEW, *nū*: pt. of KNOW, which see.

KNIB, KNIBBING: for NIB, etc., which see.

KNICKERBOCKERS, n. plu. *nĭk'kēr-bōk'ērz* [so called after Diedrich *Knickerbocker*, the imaginary author of a humorous fictitious history of New York, written by Washington Irving: Ger. *knicker*, a niggard; *bock*, a he-goat, a box]: trousers sitting loosely on the thigh and ending at the knee, as worn in n. Ger. and Holland.

KNICK-KNACKS: see under KNACK.

KNIEBIS MOUNTAINS, *knē'bis*: range of the Lower Black Forest, bordering Würtemberg and Baden and opposite Alsace, containing several popular watering-places belonging to Baden, and the scene of many important military movements in the wars of France.

KNIFE, n. *nĭf*. KNIVES, n. plu. *nĭvz* [Icel. *knifr*; Dan. *kniv*; AS. *cnif*; Dut. *knĭff*, a knife: Ger. *kneif*, a hedging-bill, a knife; *kneifen*, to nip or pinch: F. *canif*, a pen-knife]: an instrument for nipping or snipping; a well-known cutting instrument, made of steel. KNIFE-BLADE, the cutting part of a knife. WAR TO THE KNIFE, ferocious and exterminating war.

KNIGHT, n. *nĭt* [AS. *cniht*, a boy, an attendant; Dan. *knegt*, a man-servant, a knave: Ger. *knecht*, a servant: Swiss, *knecht*, a strong, active youth; *knechten*, to put forth strength]: title of rank next below that of a *baronet*, with the privilege of prefixing to the Christian name *Sir*, as 'Sir John,' 'Sir James'; anciently, a young man admitted to the privilege of bearing arms, or to military rank: V. to dub or create a knight, which is done by the sovereign, or

KNIGHT.

the high officer acting in her name, giving the person to be knighted, who kneels at the ceremony, a touch with a sword, while the words are uttered, 'Rise, Sir James,' or 'Sir John,' as the person's name may be. KNIGHT'ING, imp. KNIGHT'ED, pp. created or made a knight. KNIGHT'LY, a. -ly, or KNIGHTLIKE, a. pertaining to a knight; becoming a knight. KNIGHT-BANNERET, formerly in *England* and *France*, a knight who carried a banner, and who, possessed of superior fiefs, was obliged to bring into the field a greater number of attendants. KNIGHT-BARONET, a baronet; a hereditary knight. KNIGHT-ERRANT, -ēr'rānt, a knight who travelled in search of adventures. KNIGHT-ERRANTRY, -ēr'rānt-rī, the practice of knights-errant. KNIGHT-TEMPLAR, see *TEMPLAR*.—KNIGHTHOOD, n. -hūd, the character, or dignity of a knight; the order or fraternity of knights (see below). KNIGHT'S-FEE, see *KNIGHTHOOD*.—KNIGHT'S SERVICE, one of the ancient tenures in England which was abolished in the reign of Charles II. and converted into Freehold (q.v.). A KNIGHT OF THE SHIRE, shīr, otherwise called in England, Knight of Parliament (see *PARLIAMENT*): an M.P. (member of parliament) for a county. CARPET-KNIGHTS, not military, but knights in civil life: see under *CARPET*. KNIGHT OF THE POST, a rogue; a false witness—so said in reference to the old punishment of the pillory. KNIGHT OF THE ROAD, a highwayman; a footpad; a robber. KNIGHT'LESS, a. in *OE.*, unbecoming a knight. KNIGHT'LINESS, n. in *OE.*, the character or bearing of a knight.

KNIGHT, nīt, CHARLES: eminent English publisher and author: 1791, Mar. 15—1873, Mar. 9; b. Windsor, where his father was a bookseller. K. early turned his attention to publishing. Among his first attempts was *The Etonian*, a periodical supported by the Eton boys, which—in spite of its juvenility—obtained reputation. He next started (1823) *Knight's Quarterly Magazine*, in London, to which place he removed in 1824: it had but a short life, but it was the beginning of his honorable career in popular literature, of which he was one of the earliest and most accomplished advocates. Among the works which K. published or edited are the *Penny Magazine*, 1832–45, started a month or two after *Chambers's Edinburgh Journal*, and having at one time a circulation of nearly 200,000 copies weekly; the *British Almanac*, and *Companion to the Almanac*; *Penny Cyclopædia* (30 vols. 1833–56); *Library of Entertaining Knowledge*—the volume on the Elephant (1831) being written by himself; *Pictorial History of England*; *Pictorial Bible* (1838), now the property of Messrs. Chambers; *Pictorial Book of Common Prayer* (1838); *London Pictorially Illustrated* (6 vols. 1841–44); *Old England, a Pictorial Museum of National Antiquities* (2 vols. 1845); *Half-hours with the Best Authors* (4 vols. 1847–8); *The Land we Live in* (4 vols. 1848); *Cyclopædia of the Industry of all Nations* (1851); and *The English Cyclopædia* (22 vols. 1854–61), based on the *Penny Cyclopædia*, but a great advance even on that admirable work, and, in fact, one of the most complete and accurate cyclopædias in the world. K. was author of

KNIGHTHOOD.

Pictorial Shakspeare, accompanied by a 'Biography' and a 'History of Opinion, with Doubtful Plays,' etc. (8 vols. 1839-41); library ed. (12 vols. 1842-44); national ed., with 'Biography' and 'Studies' (8 vols. 1851-53; *Life of Caxton* (1844); *Plays and Poems, with Glossarial Notes* (7th ed. 1857); *Knowledge is Power* (1855); and (most notable) *Popular History of England, an Illustrated History of Society and Government from the Earliest Period to our own Times* (1856-62), an original work in 8 vols.—For K.'s life, see *Passages of a Working Life during Half a Century* (3 vols. 1864-5).

KNIGHTHOOD: the order of knights. Originally knights, men-at-arms bound to the performance of certain duties, among others to attend their sovereign or feudal superior on horseback in time of war. The institution of K., as conferred by investiture, and with certain oaths and ceremonies, arose gradually throughout Europe as an adjunct of the feudal system (see **FEUDAL SYSTEM**; **CHIVALRY**). According to Tacitus it was developed first among the German tribes, and amounted to a gift of citizenship with weapons creating the recipient a servant of the state. Other authorities trace K. to the foundation of Rome, when Regulus established both the institution and the ceremony of investiture. In England the first knight created by the sword of state is said to have been Athelstane, by King Alfred, 900. Under Henry III. all men having a yearly income not less than £10 were compelled to become knights under penalty of fine.

Feudal K. was at once military and religious. The defense and recovery of the Holy Sepulchre, and the protection of pilgrims, were the objects to which, in the early times of the institution, the knight especially devoted himself. The system of knight-service, introduced into England by William the Conqueror, empowered the king, or even a superior lord who was a subject, to compel every holder of a certain extent of land, called a knight's fee, to become a member of the knightly order; his investiture being accounted proof that he possessed the requisite knightly arms, and was sufficiently trained in their use. The 'Statute of Knights,' of the first year of Edward II., regulating the causes that were to be held valid to excuse a man from knightly service, shows that in the 14th c. the knightly office was not always eagerly coveted; yet its social dignity was considerable, for even dukes, if not admitted into the order, were obliged to yield precedence in any royal pageant or public ceremony. In time of war, each knight was bound to attend the king for 40 days, computed from the day when the enemy arrived in the country. After the long war between France and England, it became the practice for the sovereign to receive money compensations from subjects who were unwilling to receive K., a system out of which grew a series of grievances, leading eventually to the total abolition of knight-service in the reign of Charles II.

K., originally a military distinction, came, in the 16th c., to be occasionally conferred on civilians, as a reward

KNIGHTHOOD.

for valuable services to the crown or community. The first civil knight in England was Sir William Walworth, lord mayor of London, who won that distinction by slaying the rebel Wat Tyler in presence of the king. Since the abolition of knight-service, K. has been conferred without any regard to property, as a mark of the sovereign's esteem, or a reward for services of any kind, civil or military. In recent times, it has been bestowed at least as often on scholars, lawyers, artists, or citizens, as on soldiers, and in many cases for no weightier service than carrying a congratulatory address to court.

The ceremonies in conferring K. have varied at different periods. In general, fasting and bathing were in early times necessary preparatives. In the 11th c., the creation of a knight was preceded by solemn confession, and a midnight vigil in the church, and followed by the reception of the eucharist. The new knight offered his sword on the altar, to signify his devotion to the church, and determination to lead a holy life. The sword was redeemed in a sum of money, had a benediction pronounced over it, and was girded on by the highest ecclesiastic present. The title was conferred by binding the sword and spurs on the candidate, after which a blow was dealt him on the cheek or shoulder, as the last affront which he was to receive unrequited. He then took an oath to protect the distressed, maintain right against might, and never by word or deed to stain his character as a knight or a Christian. A knight might be degraded for the infringement of any part of his oath (an event of very rare occurrence), in which case his spurs were chopped off with a hatchet, his sword broken, his escutcheon reversed, and some religious observances were added, during which each piece of armor was taken off in succession, and cast from the recreant knight.

It has been said that K. could originally be conferred by any person of knightly condition; but if so, the right to bestow it was early restricted to persons of rank, and afterward to the sovereign or his representative, as the commander of an army. In England, the sovereign now bestows K. by a verbal declaration, accompanied with a simple ceremony of imposition of the sword, and without any patent or written instrument. In some few instances, K. has been conferred by patent, when the persons knighted could not conveniently come into the presence of royalty, as in the case of governors of colonies or other persons occupying prominent situations abroad. The lord-lieut. of Ireland also occasionally but rarely exercises a delegated power of conferring it. The monosyllable 'Sir' is prefixed to the Christian names of knights and baronets, and their wives have the legal designation of 'Dame,' which in common intercourse becomes 'Lady.'

Persons who are simply knights without belonging to any order, are called in England Knights *Bachelors* (for the origin of this word, see BACHELOR). K. of this kind is now conferred only in Great Britain. A degree of K. called *Banneret* formerly existed in England and France,

KNIPPERDOLLING—KNOB.

given on the field of battle for the performance of some heroic act: see BANNERET. No knight-banneret has been created in the field since the time of Charles I., when that honor was bestowed on one Sir John Smith, for rescuing the royal standard from the hands of the rebels. George III. twice conferred the title on occasion of a review, but the proceeding was considered irregular, and the rank of the knights not generally recognized.

The form of helmet which the requirements of the later heraldry have appropriated to knights, entitling them to place it over their arms, is full-faced, of steel, decorated with bars, and with the visor a little open: see HELMET.—See CHIVALRY.

KNIPPERDOLLING, *knĭp'ĕr-dol-ĭng*, BERNARD: noted leader of the fanatical Anabaptists of the 16th c.: see ANABAPTISTS.

KNIT, v. *nĭt* [from Eng. *knot*; Icel. *knyta*, to knit—from *knutr*, a knot; Low Ger. *knutte*, a knot; *knutten*, to make into a knot]: to weave by the hand; to unite closely; to tie or fasten; to connect into a kind of network; to draw together as the brows. KNITTING, imp. N. the forming of network; junction or union. KNITTED, pp. KNITTER, n. *-ĕr*, one who knits. KNITS, n. plu. *nĭts*, in *Derbyshire*, a mining term for small particles of lead ore. KNITTING-NEEDLE, a long needle used in knitting, as thread or worsted into stockings.—SYN. of 'knit': to unite; tie; weave; join; contract; close; fasten; connect.

KNITTING: art allied to weaving, but of comparatively modern date. The time and place of its invention are disputed. Some historians assign the invention to Scotland, at a date somewhat before 1500; others assert that it came from Spain, in the time of Henry VIII.; but there is no proof that the silk stockings worn by that monarch were knitted, and in the absence of such proof, the evidence favors Scotland. K. consists in using a single thread, and with it forming a continual series of loops across the whole fabric; the next row passes through these, and they in their turn receive another set, until the whole is completed. Crochet is analogous but differs in the fact that each separate loop is thrown off and finished successively. Till recently K. was employed to make only small articles, such as stockings, gloves, etc.; furnishing an easy and amusing employment for the hands, without engaging the attention much. But the knitting-machines have now rendered it impossible for hand-work to compete with them in point of economy or beauty of workmanship; and their ingenious and complicated mechanism is now applied to the production on a vast scale of knitted fabrics of large size.—See HOSIERY.

KNOB, n. *nŏb* [Dut. *knoppe*, a knot, a bud. Ger. *knopf*, a knob, a button: comp. Gael. *cnap*, a lump, a boss—connected with KNOCK, which see]: a ball or lump at the end of anything; a hard protuberance. KNOBBED, a. *nŏbd* and *nŏb'bĕd*, full of knobs. KNOBBY, a. *nŏb'bĭ*, full of knobs or hard protuberances. KNOB'BILY, ad. *-lĭ*. KNOB'BINESS,

KNOCK—KNOSP.

n. *-nēs*, the quality of being full of knobs. **KNOB'STICK**, **n.** *-stīk*, applied to one who refuses to join a trades-union, or who retires from one.

KNOCK, **n.** *nōk* [AS. *cnucian*, to knock—from Gael. *cnac*, to crack, to crash: Ir. *cnag*, a crack, a noise: W. *cnoc*; Gael. *cnag*, a knob, a lump: Low Ger. *knobbe*, a knotty stick]: a blow or stroke with something hard or heavy; a stroke on a door; a rap: **V.** to strike with a noise and with heaviness; to rap; to drive against. **KNOCK'ING**, **imp.**: **N.** act of one who beats with a hard substance, as on a door. **KNOCKED**, **pp.** *nōkt*. **KNOCK'ER**, **n.** a small hammer fastened on a door, used in seeking admittance by rapping. To **KNOCK DOWN**, to strike down; to prostrate by blows; to assign to the highest bidder, as at an auction. To **KNOCK OFF**, to force off by beating; to cease, as from work. To **KNOCK ON THE HEAD**, to stun or kill by a blow on the head; to put an end to; to frustrate. To **KNOCK OUT**, to force out by blows. To **KNOCK OVER**, to upset; to overturn. To **KNOCK UNDER**, to yield; to acknowledge to be conquered; humbly to submit. To **KNOCK UP**, to arouse by knocking; to weary much; to become fatigued.

KNOLL, **n.** *nōl* [AS. *cnol*, the top, as of a hill: Dut. *knol*, a turnip, from its roundness: Sw. *knöl*, a bump, a knob: Ger. *knollen*, a knob, a bunch (see **NOB** and **KNOCK**)]: a little round hill; a small elevation.

KNOLL, **v.** *nōl* [another spelling of **KNELL**, which see]: to toll or ring a bell, as for a funeral. **KNOLL'ING**, **imp.** **KNOLLED**, **pp.** *nōld*.

KNOL'LYS, **HANSERD**: 1598–1691, Sep. 19; b. Chalkwell, England: Bapt. minister. He was educated at Cambridge Univ., became master of the free schools in Gainsborough; was ordained deacon in the Church of England 1629; changed his views of church govt. and of baptism 1633; preached three years longer, but without surplice or prayer-book; resigned and was imprisoned for non-conformity 1636; and escaped and fled to Piscataway, now Dover, N. H., 1638. He established probably the first church in N. H., 1638, Sep., and preached there till 1641, when he returned to England, spent four years preaching and gathering a Bapt. congregation, and was pastor of the church so formed from 1645 till his death. A Bapt. publication soc. named after him was organized in London 1845.

KNOP, **n.** *nōp* [Dut. *knop*; Sw. *knopp*, a bud: Icel. *knapp*, a knot: another spelling of **NOB**, which see]: a knob; a protuberance; a button; in *arch.*, an ornament of a bunch of flowers or leaves; foliage on the capitals of pillars. **KNOPPED**, **a.** *nōpt*, having knops.

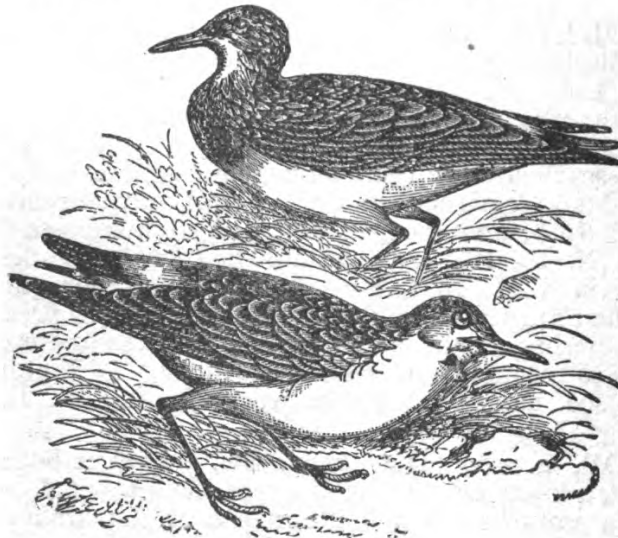
KNORRIA, **n.** *nōr'ri-ä* [after *Knorr*]: in *geol.*, a genus of coal-measure plants, being a decorticated condition of some *Lepidodendru*.

KNOSP, **n.** *nōsp* [etym. doubtful]: in *arch.*, a bud or unopened leaf or flower, used as an architectural ornament.

KNOT.

KNOT, n. *nõt* [Dut. *knodse*, a club; *knodde*, a knot; Ger. *knote*; Icel. *knútr*; L. *nodus*; a knot (see **KNOB** and **KNOCK**): a tie (see **KNOT**); loop; an interweaving or uniting of thread, cord, or rope at one point; any bond of union; a dark hard part in wood; a collection; a group; a cluster; a small band; a difficulty; something so intricate as not easily to be solved; among *seamen*, a division of the log-line; also the rate at which a ship sails at sea; a nautical mile (see **KNOT**, in Navigation): in *bot.*, a swelling in some stems where the attachment of the leaves takes place; a bird, a species of sandpiper (see **KNOT**, below): V. to tie; to unite; to form knots or joints. **KNOTTING**, imp. **KNOTTED**, pp.: **ADJ.** full of knots; in *bot.*, swollen at intervals into knobs, as a stem. **KNOTLESS**, a. *-lēs*, free from knots. **KNOTTY**, a. *-tì*, containing knots; difficult. **KNOTTINESS**, n. *-nēs*, state of being full of knots; difficulty of solution. **KNOT-GRASS**, a plant having numerous knots in the roots or underground stems; the *Polygonum aviculare*, or knot-wort, ord. *Päronychiäcæ* (see **POLYGONUM**).—**SYN.** of 'knot, n.': complication; bond; protuberance; joint; intricacy; intrigue; perplexity; confederacy; association; band; clique; epaulet; entanglement;—of 'knotty': hard; rugged; intricate; perplexed; embarrassed.

KNOT, *nõt* (*Tringa canutus*): bird of the family *Scolopacidae*, and of same genus with the dunlin, stints, etc.; called sometimes the **RED SANDPIPER**: see **SANDPIPER**. Its whole length is about ten inches. The general color, in summer, is reddish brown, finely mingled with black,



Knot (*Tringa canutus*).

gray, and white; in winter, the plumage becomes mostly ash-gray, and on the under parts white. The K. frequents high n. latitudes in summer, and breeds there; but migrates southward in winter, and is then found, sometimes in large flocks, in Europe, Asia, and America, as far s. as the W. Indies, chiefly on flat sandy shores. It runs about

KNOT.

with great activity as the wave retires, seeking its food on the sands. Its food consists in great part of small bivalve mollusks, which it swallows shell and all. It is in high esteem for the table.

KNOT: loop or twist in a rope or cord so made that the motion of one piece of the line over the other shall be stopped. The knot owes its power of passive resistance to the friction of the rope. The uses of knots are numberless. On shipboard, knots are of various sorts, each appropriated to a specific duty. In these diagrams the position of the rope or cord is shown before tightening, so that the mode of formation may be more readily understood.

The simplest K. is the 'overhand' (fig. 1). Its use is to



Fig. 1.

Fig. 2.

Fig. 3.

form a knob in a rope to stay it from slipping. By a slight alteration, the 'single sling,' or slip knot (fig. 2), is obtained, always in the middle of the rope. More complicated, but still more useful, is the 'double sling' (fig. 3), for suspending a beam or bar horizontally. The bow-line knot (fig. 4) serves to give a tight grasp round a pole or beam, which would occupy the loop *a*, or, drawn close on the rope, it forms a large knob, to prevent the rope passing a hole. The sheepshank (fig. 5) affords a means

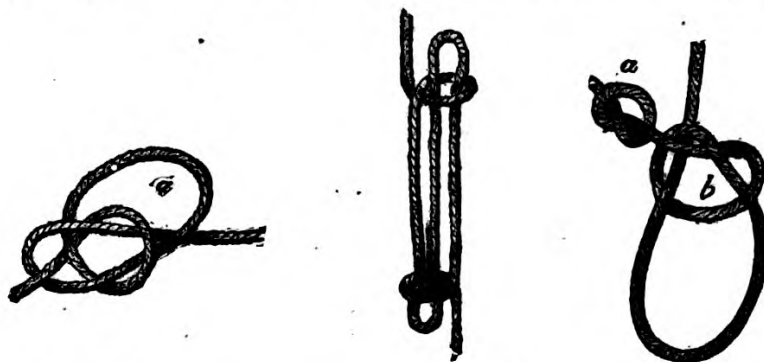


Fig. 4.

Fig. 5.

Fig. 6.

of shortening a rope temporarily, without diminishing its power of rectilineal tension. All the foregoing have been at the double or middle parts of the rope: for the end of the cordage, fig. 6 shows an admirable slip-knot, which maintains its gripe until loosened by hand; *a* is a common

KNOT.

overhand knot at the end of the string, to prevent it slipping through the loop *b*, when tightened.

For modes of joining two ropes, the weaver's or fisherman's knot (fig. 7) may be adduced as strong and neat.

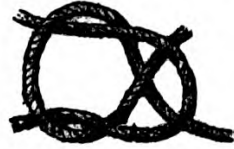


Fig. 7.



Fig. 8.

The sailor's knot (fig. 8) has the advantage, when properly made, of resisting all separating strain on the two ropes, and at the same time of being loosened immediately by a pull at one of the short ends.

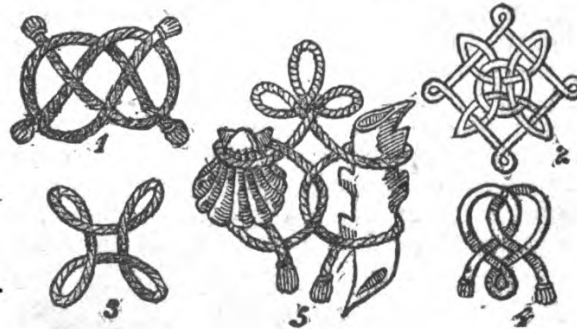
For an interlacing of two doubled ropes, the 'Carrick bend' (fig. 9) has no superior; the point of junction cannot slip, and the moment the tension ceases, the two ropes are again free from each other.



Fig. 9.

Knots have many technical names, such as bight, hitch, etc.

KNOT, in Heraldry: heraldic badge. Knots of different kinds are borne by different families as heraldic badges,



Knots:

1, Wake and Ormonde knot; 2, Lacy knot; 3, Bowen knot; 4, Heneage's knot; 5, Dacre's badge.

and are occasionally introduced as charges in shields. The forms of some of them appear to be suggested by the initial letter of the name or title of the bearer. In the Wake or Ormonde knot, it is not difficult to trace a *W* and two *O*s. The Bouchier knot, as seen on the tomb of Abp. Bouchier, at Canterbury, has a resemblance to two *B*s, and the Stafford knot to two *S*s. The Lacy knot contains a rebus on the four letters of the name.

KNOT, in Navigation: appliance for measurement of the rate at which a vessel is moving. Thus used, a *K*. represents a mile. The log-line is divided into equal parts of 50 ft. length (practically only 47.42 ft.), by knots, i.e. pieces of string rove through the strands, each of which parts is

KNOTT—KNOW.

to a geographical mile as half a minute is to an hour—i.e., as 1 to 120. The log being cast overboard, note is carefully taken of how many of these knots run out in a half minute, and it follows that the vessel is passing through the water at the same number of geographical miles per hour. The proportion of a geographical to a statute m. being nearly that of 7 to 6 (see *MILE*), a vessel making 12 knots an hour is travelling at the rate of 14 statute miles.

KNOTT, *nōt*, **JAMES PROCTOR**: lawyer: b. near Lebanon, Ky., 1830, Aug. 29. He was licensed to practice law 1851; elected member of the Mo. legislature and appointed chairman of the judiciary committee 1858; elected attor. gen. 1860; returned to Ky. 1862; elected member of congress as a democrat 1866, re-elected 1868, 74, 76, and 80; and was gov. of Ky. 1883–87. He was chairman of the house judiciary committee several terms, and with his ‘Duluth’ and other speeches won reputation as a humorist.

KNOUT, *n. nowt* [Rus. *knut*]: heavy whip, an instrument of punishment or torture used in Russia: *V.* to punish with the knout. **KNOUTING**, *imp.* **KNOUTED**, *pp.*—The *Knout* was the usual instrument of punishment in Russia after the Tartar period, and still, or within a few years, in use at two penal settlements. It was a whip with a handle 9 inches long and one complex lash, comprising a lash 16 inches long, with a metal ring; a continuation with another ring; and finally, a flat lash of hard leather, 21 inches long, and ending in a beak-like hook. The offender was tied to two stakes, stripped, and received on the back the specified number of lashes; 100 or 120 were equivalent to sentence of death, but in many cases the victim died under the operation long before this number was completed. The whipping was inflicted by a criminal. In earlier times the nose was slit before the whipping, the ears were cut off, and the letter *V* for *vor* (rogue) was branded on the forehead. For the *K.* Nicholas substituted the *pleti*, a three-thonged lash, and this was disused by Alexander II. [*K.* is by Russians, Germans, and French pronounced *kēnoot*; in English, usually but absurdly *nowt*.]

KNOW, *v. nō* [AS. *cnawcan*, to know: Icel. *kná*, to know how to do, to be able: Skr. *jna*; Pol. *znac*, to know: Gr. *gnōō*; L. *gnosco*, I know]: to understand clearly; to be informed of; to be familiar with; not to be doubtful; to recognize; to distinguish. **KNOWING**, *imp.*: **ADJ.** cunning; skilful; well informed: *N.* in *OE.*, learning; education. **KNEW**, *pt. nū*, did know. **KNOWN**, *pp. nōn*, understood clearly. **KNOWABLE**, *a. nō'ā-bl*, capable of being known. **KNOWINGLY**, *ad. -lī*, with full understanding; as one having knowledge. **KNOWLEDGE**, *n. nōl'ēj* [Eng. *know*, and Icel. *leik*; Norw. *leikje*, usually employed in the composition of abstract nouns, much as *ness* is used in English]: certain perception; learning; that which is known; information; skill in anything (see below). **KNOW NOT WHAT**, some trifle or thing difficult to name or describe, or of no definite name. *Note.*—The *lock* in ‘wedlock’ and the *ledge* in ‘knowledge’ are the same postfix, the latter

KNOW—KNOWLES.

Scandinavian, the former AS.: *ac-knowledge* is a misspelling for *a-knowlege*, the AS. *a* being changed into the L. *ac* for *ad*—see Skeat.—SYN. of 'knowledge': literature; erudition; science; letters; art; cognition; instruction; acquaintance; scholarship; enlightenment; skill; cognizance; notice.

KNOW, or KNOWE, n. *now* [see KNOLL 1, and KNOB and KNOT]: in *Scot.*, a little hill; a knoll.

KNOWLEDGE [see KNOW]: certain perception; a term associated with the greatest problems and controversies of philosophy. The Perception of the External or Material World (see COMMON SENSE: PERCEPTION), the nature of Belief q.v. the ultimate analysis of a Proposition or Judgment (see JUDGMENT), all are involved in the discussion of what is meant by knowledge. Moreover, we may, in connection with this word, take up the consideration of Thought or Intelligence on the whole, in contrast to the feelings and volitions (see INTELLECT). In a still different phase of meaning, we may be led to consider the nature of Science or Philosophy, which is a species of knowledge distinguished by the two features of being *generalized*, as distinct from individual or particular facts, and being *verified* or attested by careful evidence, in contrast to the loose assertions that satisfy the ordinary run of mankind.

A distinction, considered by Sir William Hamilton and others to be of great importance in metaphysical philosophy, is that of Immediate or Presentative, and Mediate or Representative Knowledge. The one is the K. or cognizance that we have of the modifications of our own minds, so to speak, without inferring anything beyond, as in our various sensations and emotions. When we are affected by cold or heat, hunger, thirst, odor, or sound, we are conscious of a something, which may be said to be wholly contained in our own minds; but when a present modification of the mind is looked on not for its own sake, but as bodying forth something more than itself, as in memory, our K. is then said to be mediate. Thus, an actual sensation is immediate, but a recollection, or idea, or imagination is mediate and representative. Mr. Mansel makes this distinction the basis of his division of the mind. 'Consciousness,' he says, 'in relation to the person conscious, is of two kinds; or rather, is composed of two elements—the presentative, or intuitive; and the representative, or reflective. The phenomena of the former class may be distinguished by the general name of *Intuitions*; those of the latter, by that of *Thoughts*.'

It appears from the above remarks that there is no question connected with K. that does not come into discussion under some other head; and as a general rule, it is best to take up the difficult problems of the philosophy of mind under those names that severally suggest each in its singleness, instead of confusing a multitude together: see the several titles.

KNOWLES, *nôlz*, JAMES SHERIDAN: English dramatist: 1784, May 21—1862, Nov. 30; b. Cork, Ireland; son of James K., the lexicographer, who was cousin-german

KNOWLTONIA—KNOW-NOTHINGS.

to Richard Brinsley Sheridan. The family removed to London 1792, and here young K. received his education. After holding a commission in the army, he became an actor, and made his first appearance at the Crow Street Theatre, Dublin; but he attained no eminence in this profession. Subsequently, during several years in Belfast and Glasgow, as a teacher of elocution, he laid the foundation of his fame as a dramatist. His *Caius Gracchus* was first performed at Belfast 1815. It was followed by *Virginus*, his most effective piece, afterward recast for the London stage, where Macready took the principal part. He wrote 13 other plays. None of his productions show great genius; they are, however, the best 'acting plays' produced by an Englishman in modern times. About 1845, he relinquished the stage from religious scruples, and 1852 joined the Baptist Church, became a preacher, and was distinguished for religious zeal. In 1851, he published a little controversial work, displaying considerable acuteness, *The Idol Demolished by its own Priest*, in answer to Cardinal Wiseman's Lectures on Transubstantiation. K. died at Torquay. A publication of his *Lectures on Dramatic Literature* began 1876.

KNOWLTONIA, *nōl-tō'nī-a*: a genus of south African plants, of the natural order *Ranunculaceæ*, with flowers resembling those of *Adonis*, and succulent fruit. *K. vesicatoria*, which has bi-ternate leathery leaves, and flowers in few-flowered umbels, is remarkable for its acridity and blistering power. The bruised leaves are used at the Cape of Good Hope instead of cantharides; they raise a blister in half an hour, and it keeps open a long time. The sliced root seems to be still more powerful.

KNOWN: pp. of **Know**, which see.

KNOW-NOTHINGS: popular name given to a secret, oath-bound political fraternity in the United States, founded 1852 for the purpose of preventing the election or appointment of any alien to office under federal, state, or municipal govts. Whenever questioned concerning their movements or intentions, the members invariably answered 'I don't know;' hence their popular name. Stimulated by the extension of slavery, the increasing power of the Rom. Cath. Church, and the great influx of immigrants, no less than by the determination of large numbers of naturalized citizens to secure public offices, the members of the K.-N. raised the cry 'Americans must rule America,' and 1854 organized a distinct political party under the name American party. In the elections of that year the new party surprised the old ones and showed unexpected strength by carrying several of the n. states, including N. Y. In 1855 its influence was seen slightly in the w. and strongly in the s.; and 1856 it nominated Millard Fillmore for pres., elected 8 'American' govts. in 32 states, and secured a popular vote of 874,534 and an electoral vote of 8 (Md.) for its national candidate. After a second failure to establish itself 1860, the K.-N. dropped out of active politics and soon ceased to exist.

KNOX.

KNOX, *nōks*, HENRY: 1750, July 25—1806, Oct. 25; b. Boston: soldier. He received a common-school education, engaged in business as a bookseller, and became active in military matters when 18 years old. Immediately after the battles of Lexington and Concord, he abandoned his business, joined the army, served as a volunteer aide to Gen. Ward in the battle of Bunker Hill, and with Washington's consent collected 55 heavy guns at the forts on the Canadian frontier and transported them on sleds for use in the siege of Boston. For this feat congress appointed him brig. gen. of artillery, and during the siege he was employed as engineer and artillery officer. He was for some time in command of the artillery at New York; rendered conspicuous service in the battles of Trenton, Princeton, Brandywine, Germantown, and Monmouth; was frequently sent to New England to procure money, stores, and recruits; was a member of the court-martial that tried Maj. André (q.v.); directed the artillery in the siege and battle of Yorktown; and after Cornwallis's surrender was appointed by congress maj. gen., one of the commissioners to arrange terms of peace with Great Britain, and commissioner to receive the surrender of New York. Through the war he was Washington's constant companion and personal friend. In 1785 congress appointed him sec. of war, and during a part of his tenure of 11 years he had charge of the navy department also. In 1795 he retired to private life on his wife's estate in Me., though frequently called to service in the legislature and council; and 1798, while for a short time war with France seemed imminent, he was recalled with Washington to service in the army.

KNOX, JOHN: great Scottish reformer: 1505—1572, Nov. 24; b. in a suburb of Haddington called Gifford Gate, where a small field still goes by the name of 'Knox's Croft.' The social position of his parents is not clearly ascertained. His own statement is, that 'his great-grandfather, gudesehir, and father served under the Earls of Bothwell.' He is supposed to have come of an old and respectable family, the Knoxes of Ranfurly, Renfrewshire. He received his early education at the grammar-school of Haddington, and 1521 went to the Univ. of Glasgow. He was there a pupil under Major, and soon proved himself an apt and distinguished disputant in the scholastic theology. He was considered as likely to rival his master in the subtleties of the dialectic art. From the same teacher, he no doubt derived his first impulse to that freedom of political opinion and independence of thought that characterized his public life. He is said to have been ordained before 1530, about which time, or shortly afterward, he went to St. Andrews, and began to teach there. There is, however, at this stage of his life a gap of 12 years, or nearly so, which the most careful research has not filled. His attachment to the Roman Church is supposed to have been shaken chiefly by the study of the Fathers, about 1535, but he did not openly profess himself a Protestant till about 1543. He was degraded from his orders, and being even in danger of assassination, took refuge with

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Douglas of Longniddry, and there remained till the end of 1545.

Cardinal Beaton was at this time in the height of his power: after seizing George Wishart at Ormiston, he had him brought to St. Andrews, and burned there, in front of his castle, 1546, March. K. clearly appears upon the scene of the Reformation first as companion of Wishart. While the latter prosecuted his career as a preacher in Lothian, K. waited upon him, bearing before him, he tells us, a 'twa-handed sword.' He already coveted the post of danger, and full of enthusiasm, was ready to defend his zealous friend at the peril of his own life. After Wishart's seizure and death, he withdrew for a while again into retirement. He would fain have clung to the martyr, and shared his fate, but the latter would not have it so. 'Nay,' he said; 'return to your bairnes, and God bless you: ane is sufficient for a sacrifice.' Knox's 'bairnes' were his pupils, sons of the Lairds of Longniddry and Ormiston. He continued in charge of them for some years, till the great event which ere long followed the martyrdom of Wishart opened for him a more prominent career. On the morning of May 29, Cardinal Beaton was murdered in his castle, from the windows of which he had beheld the sufferings of the martyr two months before. Taken possession of by the band of nobles and others who had accomplished so audacious a design, the castle at St. Andrews became the temporary stronghold of the Reforming interest. K. took refuge in it with his two pupils. Here his great gifts as a preacher were first discovered; and having found the secret of his influence, the parish church of St. Andrews soon resounded with his indignant voice, denouncing the errors of popery. His career at this time, however, was soon cut short by the surrender of the fortress, and his imprisonment in the French galleys.

For two years he remained a prisoner, and underwent many privations. He was then liberated, and allowed to depart to England, where he resided four years, from 1549 to the beginning of 1554, a time of great and fruitful activity to him. He was appointed one of Edward VI.'s chaplains, and lived on terms of intimate intercourse with Cranmer and others of the English reformers. He is supposed to have had considerable influence on the course of the English Reformation, especially in regard to the liberal changes introduced into the service and Prayer Book of the Church of England, in the close of Edward's reign. He was much engaged in preaching, especially in the north, in Newcastle and Berwick; and at the latter place he fell in love, and married Marjory Bowes.

The accession of Mary drove him and others to the continent. He was reluctant to flee, but partly by advice and partly by tears, he was compelled to consult his safety. He settled temporarily at Dieppe, whence we hear of him writing an *Admonition to the Professors of God's Faith in England*. He then went into Switzerland, and returning, settled at Frankfurt-on-the-Main, where he is notable in connection with what are known as the 'Frank-

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furt Troubles,' certain disputes as to the use of King Edward's Service-Book in the congregation of English Protestants there. Toward the end of 1555, he made a rapid visit to Scotland, where he did much to encourage the cause of the Reformation. Convinced, however, that the 'time of deliverance' was not yet come for his country, he retired once more to Geneva, where he settled as pastor of a congregation for nearly three years, which were among the quietest, and probably the happiest years of his life.

Recalled to Scotland 1559, May, he entered on his triumphal course as a reformer. Political necessities had driven the queen regent to temporize with the 'Lords of the Congregation,' or the reforming nobles. Having somewhat re-established her power, she wished to withdraw her concessions; but the reforming impulse had gathered a strength that could no longer be resisted. The heads of the party assembling at Dundee, under Erskine of Dun, proceeded to Perth. There the pent-up enthusiasm which had been long collecting was roused into furious action by a sermon of K. on the idolatry of the mass and of image-worship. A riot ensued. The 'rascal multitude,' as K. himself called them, broke all bounds, and destroyed the churches and monasteries. Similar disturbances followed at Stirling, Lindores, St. Andrews, and elsewhere. The flame of religious revolution was kindled throughout the country, aggravating the civil war already raging. At length the assistance of Elizabeth and the death of the queen-regent brought matters to a crisis; a truce was proclaimed, and a free parliament summoned to settle differences. The result of the parliament, which met 1560, Aug., was the overthrow of the old religion, and the establishment of the Reformed Kirk in Scotland. In all this, K. was not only an active agent, but *the* agent above all others. The original *Confession of Faith* of the Reformed Kirk and the *First Book of Discipline* bear the impress of his mind. He was far from attaining all his wishes, especially as to the provision for the support of the church and of education throughout the country; he soon found that many of the nobles were far more zealous for destruction than for reformation; still, he accomplished a great and radical work, which was destined to be consolidated only after many years;

The arrival of the youthful Queen Mary, 1561, brought many forebodings to the Reformer; he apprehended great dangers to the Reformed cause from her character and her well-known devotion to the Roman Church. The Reformer's apprehensions scarcely permitted him to be a fair, certainly not a tolerant, judge of Mary's conduct. Misunderstandings very soon sprung up between them, and he relates, with a somewhat harsh bitterness, his several interviews with her. At length he came to an open rupture with the queen's party, including Murray and Maitland, and many of his former friends. He took up an attitude of unyielding opposition to the court, and in his sermons and public prayers, indulged freely in the expression of his feelings. The result was his temporary alienation from the more moderate

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Protestant party, who tried to govern the country in the queen's name. For a while, 1563-65, he retired into comparative privacy.

The rapid series of events which followed Mary's marriage with Darnley—the revolt of the dissatisfied nobles, with Murray at their head, the murder of Rizzio, and then the murder of Darnley (1567), the queen's marriage with Bothwell, her defeat and imprisonment, served once more to bring Knox into the field. He was reconciled with Murray, and strongly abetted him in all his schemes of policy during his regency. Further reforms were effected by the parliament which convened under his sway in the close of 1567. The sovereign was taken bound to be a Protestant, and some provision, though still an imperfect one, was made for the support of the Protestant clergy. K. seemed at length to see his great work accomplished, and is said to have entertained the idea of retiring to Geneva. But the bright prospect on which he gazed for a little was soon overcast—Murray's assassination, and the confusion and discord which sprang out of it, plunged the Reformer into profound grief. He once more became an object of suspicion and hostility to the dominant nobles, and misunderstandings even sprang up between him and some of his brethren in the General Assembly. He retired to St. Andrews for a while, to escape the danger of assassination with which he had been threatened. There, though suffering from extreme debility, he roused himself to preach once more, and in the parish church where he had begun his ministry, made his voice to be heard again with something of its old power. Assisted by his servant, the 'good, godly Richard Ballenden,' into the pulpit, 'he behoved to lean upon it at his first entry; but ere he was done with his sermon, he was so active and vigorous, that *he was lyke to ding the pulpit in blads and flie out of it.*'

In the end of 1572, he returned to Edinburgh to die; his strength was exhausted; he was 'weary of the world,' he said, and quietly fell asleep.

K.'s character is distinguished by firmness and decision, and a plain, somewhat harsh sense of reality. He was a man of strong, and even stern convictions, and he felt no scruples, and recognized no dangers in carrying out his convictions. He was shrewd, penetrating, inevitable in his perceptions and purposes. No outward show, or conventional pretense, deceived him; he went straight to the heart of everything; and consistently with this clear and rough shrewdness of perception, his language is always plain, homely, and many will say harsh. He had learned, he himself says, 'to call wickedness by its own terms—a fig, a fig; a spade, a spade.' Above all, he was fearless; nothing daunted him; his spirit rose high in the midst of danger. The Earl of Morton said of him truly as they laid him in the old churchyard of St. Giles: 'He never feared the face of man.' In Scotland, K., no doubt, accomplished a great work. Whether the work would not have been better if it had been less violently done, if the spirit of love and moderation, as well as the spirit of power, had presided over it,

KNOX—KNUCKLE.

is a question regarding which there may be much division. But even if we should take exception to some things that he did or encouraged, we may admire the consistent boldness, the deep earnestness, and the self-denying, unflinching zeal of the great Reformer.—See M'Crie's *Life of Knox*.

KNOX, JOHN JAY: financier: b. Knoxboro', N. Y., 1828, Mar. 19. He graduated at Hamilton College 1849; was trained to the banking business in Vernon, N. Y.; conducted a private bank in St. Paul, Minn 1857-62; advocated a national banking system with circulation guaranteed by the govt. 1862; received a treas. appointment the same year; was placed in charge of the mint and coinage correspondence of the treas. dept. 1866; appointed deputy comptroller of the currency 1867; promoted comptroller 1872; and resigned the office to become pres. of the National Bank of the Republic in New York 1884. Beside regular and special official reports, he published *United States Notes, or a History of the Various Issues of Paper Money by the Government of the United States* (New York 1884, 7).

KNOXVILLE, *nŏks'vil*: city, cap. of Knox co., Tenn.; on the Tennessee river at the head of navigation, and on the E. Tenn. Va. and Ga., K. and O., Powell's Valley, K. and Augusta, and K. Southern railroads; 112 m. n.e. of Chattanooga, 165 m. e. of Nashville. It occupies a picturesquely broken site in the centre of the great valley of e. Tenn., one of the most fertile regions in the United States, and beside its public institutions is noted for its commercial and industrial interests. It is the seat of the co. courthouse (cost \$150,000); U. S. govt. building (\$450,000) containing post-office, court rooms, and the s. pension office, state insane asylum (\$300,000); Univ. of Tenn. (endowed with \$500,000 by the state); K. Univ. for colored students; Tenn. Institute for the Deaf and Dumb; and a girls' seminary; and has a public library (\$50,000), and an excellent public school system with commodious buildings (more than \$200,000). There are also 31 churches, 4 national banks (cap. \$675,000), 2 state banks (cap. \$80,000), 1 private bank, 2 theatres, and 3 daily newspapers. The industries comprise rolling, marble, flouring, cotton, and woollen mills; extensive car and car-wheel works; foundries; furniture and sash factories; 10 lumber yards; 15 coal companies, and many smaller interests. K. has more than 10 m. of street railroads, improved water-works, gas and electric light plants, and fire alarm telegraph; and is locally known as 'the Queen City of the Mountains.' Pop. (1870) 8,682; (1880) 9,693; (1887) 36,703.

KNUBS, n. plu. *nŭbs*: the waste silk formed in winding off the threads from the cocoons.

KNUCKLE, n. *nŭk'l* [Dut. *knokel*, the knotty or projecting part of the joints; *knoke*, a knot in a tree, a bone: Ger. *knöchel*, a knuckle; *knochen*, a bone: Dan. *knokkel*, a knuckle]: the outer part of the joint of a finger when bent: V. to strike with the knuckles; to bend the fingers. **KNUCKLING**, imp. **KNUCKLED**, pp. *nŭk'ld*. **KNUCKLE-**

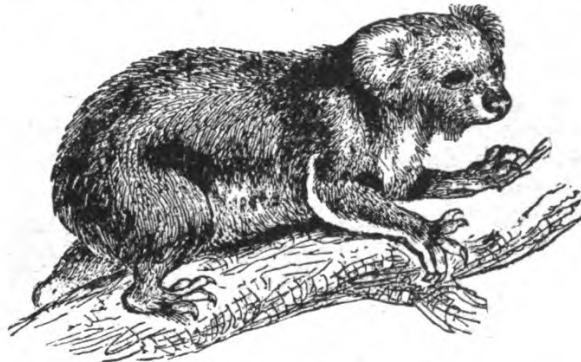
KNUR—KOBRYN.

DUSTER [slang]: an iron instrument with nobs or projecting points, contrived to cover the knuckles and protect them from injury when striking a blow, but chiefly to mutilate and disfigure the person struck. To **KNUCKLE UNDER**, to yield or submit.

KNUR, n. *nēr* [Ger. *knorren*, a protuberance: O. Dut. *knorre*, a hard swelling, a knot in wood: Sw. *knorla*, to twist, to curl]: a contorted knot in wood; a knot. **KNURRY**, a. *nēr'ri*, full of knurs or knots—connected with *gnarl*, which see.

KNUTSFORD, *nūts'ford*: small market-town of Cheshire, England; 23 m. e. n. e. of the city of Chester. The name is said to be derived from King Canute, or Knut, having with his army forded the Bollin here. Pop. abt. 3,600.

KOALA, *kō-ā'la* (*Phascolarctos cinereus*): marsupial quadruped, commonly referred to the family *Phalangistidae*, and nearly resembling the phalangiers in dentition, but having the molar teeth much larger. The toes of the fore-feet are in two opposable groups, of two and three, a character not found in any other quadruped, but well adapted to grasping the branches of trees, on which the K. often hangs with its back undermost, like the sloth. There is scarcely any rudiment of a tail. The general



Koala (*Phascolarctos cinereus*).

form is not unlike that of a young bear. The female carries her young on her back, for a long time after it is capable of leaving her pouch.

KOBBE, *kōb'bē*: town of central Africa: see **DARFUR**.

KO'BE: see **HIOGO**.

KOBOLD, n. *kō'bōld*: German word signifying a spirit or spectre; a dwarf or mountain spirit; whence Eng. *goblin*: see **GOBLIN**.

KOBRIN, or **KOBYRN**, *kō'brēn*: town of Russian Poland, govt. of Grodno, 139 m. e from Warsaw, on the right bank of the Machazica, a tributary of the Northern Bug. It is favorably situated for commerce, the Machazica and the Bug and Vistula being here connected by a canal with the Pripet, and thus with the Dnieper. There is a Greek abbey here. Pop. 8,750.

KOCH—KOH-I-NÛR.

KOCH, *kôch*, KARL HEINRICH EMMANUEL: 1809-1879, May 25; b. Weimar: celebrated traveller and naturalist. He studied at the universities of Würzburg and Jena, and 1836, undertook a scientific journey to s. Russia. In 1843, he visited Turkey, Armenia, Pontus, the Caspian Sea, and the range of the Caucasus. In 1839, he was appointed prof. of botany at Jena, and 1847 at Berlin, where he died. His chief work is his *Dendrologie* (1869-72), and accounts of his travels.

KOCH, ROBERT, M.D.: b. 1844, at Klausthal in the Harz: bacteriologist. He studied at Göttingen, and practiced medicine at Hanover and elsewhere. Called to be a member of the imperial board of health in Berlin, he further extended his researches and discoveries in microscopy and bacteriology. His name is especially identified with the doctrine that splenic fever, consumption, and cholera are due each to a specific bacillus (see GERM THEORY), which in the case of cholera he declared to be comma-shaped.

KOCK, *kôk*, CHARLES PAUL DE: French novelist, dramatist, and poet: 1794, May 21—1871, Aug. 29; b. Plassy, near Paris; son of a Dutch banker who perished on the scaffold during the French Revolution. Originally intended for a mercantile career, he applied himself to literature against the wishes of his relatives. His novels, though with no trace of real genius, acquired a very unenviable notoriety by the licentious freedom of their representations. K. composed more than 50 novels, besides a great number of vaudevilles and stories in verse. His earlier works are considered superior to his later ones.—HENRI DE K., son of the preceding, like Dumas *filz*, has unhappily followed his father's footsteps, if we may judge from the titles of some of his novels.

KOHAT, *kô-hât'*: town of the Punjab, lat. 33° 32' n., and long. 71° 27' e., in the small but fertile and populous mountain-valley of K. which forms an administrative district. A few miles e. are springs of naphtha, and rich and extensive deposits of sulphur. K. is traversed by two important routes—the route from Peshawur to Kala Bagh, and another by Bungush to Khorassan. Pop. 12,000.

KOH-I-NÛR, or KOH-I-NOOR, n. *kô'î-nôr'* [lit., *mountain of light*]: a noble diamond now in possession of the queen of England. According to Hindu legend, it was found in a Golconda mine, and its possessors have, with few exceptions, been the rulers of Hindustan. After belonging successively to the Bahmani, Khilji, Lodi, and Mogul kings, it came, 1739, into the hands of Nadir Shah, who gave it its present designation. From him it went to the Abdâli monarchs of Afghanistan, the last of whom, Shah Sujah, gave it to Runjeet Singh, ruler of the Punjab. On the abdication of the Maharajah Dhuleep Singh, and the annexation of the Punjab 1849, it was surrendered to the sovereign of Great Britain. It is said to have weighed originally 794 carats; but was reduced by cutting to 186 carats. In this state, rose-cut, it was shown at the Great Exhibition of 1851, and was then valued at about £140,000.

KOHL—KOKO-NOR.

It was re-cut 1852, and now, as a regular brilliant, weighs a little over 106 carats. Recent estimates of its value are abt. £120,000. See Streeter's *Precious Stones and Gems*. (1877).

KOHL, *kōl*, JOHANN GEORG: 1808, Apr. 28—1878, Oct. 28; b. Bremen: eminent German traveller and author. He studied at Göttingen, Heidelberg, and Munich; and settled in Dresden 1838, from which place he made excursions in all directions; visiting every important district of Europe, and on his return from each expedition, published his experience in a series of works. In 1854, he went to America, where he travelled four years. He returned to Germany, and became city librarian at Bremen, where he died. His writings include works on various European countries (between 1842 and 1851); also on Canada (1855), the United States, and a *History of the Discovery of America* (1861; Eng. trans. 1872).

KOHL-RABI, n. *kōl-rá'bí* [a supposed corruption of *caulorapa*, a cabbage-turnip: Ger. *kohl-rübe*, kale-turnip; so French *chou rave*]: cultivated variety of the Kale or Cabbage (*Brassica oleracea*), distinguished by the swelling of the stem just above the ground, in a globular form, to the size of a man's fist or larger, leaf-stalks springing from the swollen part and adding to the peculiarity of its appearance. This is the part which is used, and its uses are similar to those of the turnip. In quality, it more nearly resembles the Swedish than the common turnip, and the use of it for feeding cows does not give their milk a disagreeable flavor, as when they are fed on turnips. K. is very hardy, its leaves, as well as its stem and root, enduring the most severe winters. It is a common field-crop in Sweden. In the cultivation of K., it is usual to sow it on seed-beds, and to transplant by dibbling into fields; but this is perhaps not the best mode. It ought, however, to be sown earlier than even Swedish turnip; and raised drills are unsuitable for it, owing to the effect of winds. It is more solid and more nutritious than any kind of turnip of the same size. There are numerous sub-varieties. K., like all the varieties of *Brassica oleracea*, delights in strong rich soil and abundant manure.

KOKOMO, *kō'kō-mō*: city, cap. of Howard co., Ind.: on Wild Cat creek, at the crossing of the Indianapolis Peru and Chicago and the Pittsburg Cincinnati and St. Louis railroads, and e. terminus of the Toledo Cincinnati and St. Louis railroad; 54 m. n. of Indianapolis. It is the seat of a state normal school, and has a high-school building that cost \$40,000, 1 national bank (cap. \$100,000), 1 private bank, 3 weekly newspapers, and manufactories of machinery, hubs and spokes, sash and blinds, furniture, woolen goods, and flour. Pop. (1870) 2,177; (1880) 4,042.

KOKO-NOR, *kō-kō-nawr'* (or *Kuku-nor*): remarkable lake on the borders of Tibet, Mongolia, and China, s. of the Nanshan Mountains, and just n. of the basin of the Upper Hoangho. The lake is the centre of a closed basin, and is 10,500 ft. above the level of the sea. Its very salt waters,

KOKRA WOOD—KOLLÁR.

exquisitely blue in color, have an area of 2,300 sq. m., the shores forming an elliptical boundary line more than 200 m. in length. On a rocky island in the lake, ten Buddhist lamas live.

KOKRA WOOD, *kōk'ra*, or **COCUS WOOD**, *kō'kūs*: wood of an Indian tree, *Lepidostachys Roxburghii*, which belongs to a very small nat. ord. *Scepaceæ*, remarkably allied at once to *Euphorbiaceæ* and to *Amentaceæ*. K. W. is exported to some western countries in logs six or eight inches in diameter, having the heart-wood of a rich deep brown color and very hard. It is much used in the manufacture of flutes and other musical instruments. The Kokra-tree has leathery, alternate leaves.

KOLA, *kō'lá*: town notable only as the most northern of European Russia, and one of the most northern towns in Europe. It is between the Kola and its tributary, the Tuloma, not far from the Icy Sea, and has a secure and capacious harbor. The inhabitants, Russians, Lapps, and Finns, are occupied chiefly with walrus, whale, and cod fishery. Pop. (1880) 743.

KO'LA NUT: see **COLA NUT**.

KOLAPUR, *kō-la-pōr'* (*Kolhāpur*): principal town of a tributary state in Bombay, 130 m. s. of Poona; pop. of town 40,000—The raj, or state, including 11 smaller states tributary, has an area of 2,820 sq. m. Pop. of state 800,189, largely Mahrattas.

KOLARIANS, *kō-lā-rī-anz*: group of aboriginal wild races in India (q.v.), represented by Santals, Bhils, Mhairs, etc., mostly heathens.

KOLIAZIN, *kō-lē-ā-zēn'*, or **KALASIN**, *kā-lā-zēn'*: town in the govt. of Tver, European Russia, on the right of the Volga. It has extensive trade in corn, tallow, and linen. Pop. (1880) 7,167.

KOLIN, *kō-lēn'* (Bohemian *Nový Kolín* 'New K.'): town of Bohemia, on the Elbe, about 35 m. e. of Prague. It has manufactures of cotton, linen, etc.; and is noted for the great battle in its vicinity 1757, June 18, between 60,000 Austrians under Marshal Daun, and 32,000 Prussians under Frederick II. The Prussians were defeated in spite of the obstinate valor of their monarch, who charged at the head of his cavalry seven times in succession. Pop. (1880) 11,332.

KOLLÁR, *kōl'lar*, **JOHN**: conspicuous Slavic poet and scholar: 1793–1852, Jan. 29; b. Moschowze, in n.w. Hungary. He studied at Presburg and Jena, and 1819 became pastor of a Prot. congregation at Pesth. His first work was a volume of songs and poems, *Basne* (Poems, Prague 1821); followed by his *Slavý Dcera* (The Daughter of Glory, Buda 1824; 3d ed., Pesth 1832), regarded by his countrymen as his greatest work; and *Rozprawy e Imenach* (Treatises on the Name and Antiquities of the Slavic People and their Ramifications, Buda 1830). K.'s fame, however, rests on his being one of the earliest and most zealous advocates of Pan Slavism (q.v.). The work in which this ten-

KÖLLIKER—KOLZOW.

dency first appears was in German, entitled *Ueber die literarische Wechelseitigkeit zwischen den Stämmen und Mundarten der Slav. Nation* (Pesth 1831). The revolution in Hungary compelled him to abandon his country. He withdrew to Vienna, where he was made prof. of archeology 1849.

KÖLLIKER, *köl' lē-kér*, ALBRECHT: German physiologist: prof. of anatomy and physiology in the Univ. of Würzburg; b. 1817. He is distinguished principally in the department of microscopic anatomy and the development of the embryo; though his contributions to natural history generally are important. Among his principal works are *Mikroskopische Anatomie; Handbuch der Gewebelehre des Menschen* (translated for the Sydenham Society by Busk and Huxley, under the title *A Manual of Human Histology*, 2 vols.); *Die Siphonophora oder Schwimmpolypen von Messina*; and *Entwicklungsgeschichte des Menschen u. d. höheren Thiere*. With Von Siebold, he is editor of *Zeitschrift für wissenschaftliche Zoologie*, the most important scientific natural-history journal in Germany.

KOLOMEA, *kō-lō-mā' á*, or KOLOMYA: town of Austrian Galicia on the Pruth, at the base of the Carpathian Mountains, 112 m. s.s.e. of Lemberg. It is a very old town, and formerly carried on an extensive trade. Pottery is still largely manufactured. Pop. (1880) 22,867, half of whom are Jews.

KOLOMNA, *kō-lōm' ná*: district of Great Russia, govt. of Moscow, 62 m. s.e. of the city of Moscow, on the river Moskva. There are communications by water with Nijni-Novgorod; and a railway passes the town in the direct line through Riazan, from Moscow to the Sea of Azov, which has greatly increased the trade of the district. Weaving, silk-spinning, and cotton-printing are carried on, with manufactures of cotton and leather. Pop. (1880) 18,808.

KOLOSSES: see KADIAKS.

KOLYMA, *kō-lē-má'*: river in e. Siberia, flowing from the Stanovoy Mountains, among which it takes its rise lat. 61° 5' n. After a n.e. course of 1,000 m., it falls into the Arctic Ocean, lat. 69° 40' n.

KOLYVAN, *kō-lē-ván'*: town in the govt. of Tomsk, Siberia, on the river Ob, lat 55° 21' n., and long. 82° 46' e.; remarkable for extensive quarries of jasper in its neighborhood. There is a large manufactory of jasper ornaments, which belongs to the Russian government. Pop. (1880,) 3,637.

KOLZOW, *kolt' sof*, ALEXEI VASSILIEVICH: Russian poet: 1809-1842; b. Voronesh; son of a cattle-dealer. Most of his songs are among the choicest pearls of Russian poetry. After a merely rudimentary education, he was employed by his father in feeding cattle on the steppes in summer, and in winter in attending the markets. His talent for poetry was early developed, and under patronage of some Russian writers, he was about to settle in St. Petersburg, and to apply himself to literary pursuits, when he suddenly died.

KOMBE—KÖNIG.

A complete edition of his poems with biography, was published by Belinsky 1846.

KOMBE, n. *kõm'bē* [native name]: the famous arrow-poison of s. Africa, furnished by the *Strophanth'us kombē*, ord. *Apocynacēæ*.

KO'MORN: see COMORN.

KONG, *kõng*: district in the w. of n. Africa, in the region of the K. Mountains (q.v.), remarkable for the industry of its inhabitants and for its gold trade.

KONG: large town in the w. of n. Africa, lat. 8° 53' n., and long. 3° 30' w., among hills 540 m. s. of Timbúktu. It consists entirely of clay-houses, and is the centre of numerous converging caravan routes. The inhabitants, chiefly Mandingoes, and of the Mohammedan religion, manufacture cotton-cloths extensively.

KONG MOUNTAINS: a range northward from the coast district, in the w. of n. Africa; extending from w. to e. about 200 m. from the shore of the Gulf of Guinea; thought to be an offset from the high table-land of Senegambia. Little is known regarding them. The summits may reach an elevation of 2,500 ft. (see Burton, *Proc. Geog. Soc.* 1882).

KONIA'GAS: see KADIAKS.

KONIEH, *kõ'nē-eh*: large town of Asiatic Turkey, cap. of the vilayet of K.; in a rich, well-watered plain, lat. 37° 54' n., and long. 32° 40' e. It is surrounded by walls two to three m. in circuit, built from the ruins of ancient Seljuk edifices, and surmounted by square towers. Its numerous minarets, and its mosques and other public buildings, give it an imposing appearance, but like most of the towns of Asia Minor, it is now in sadly ruinous condition. Many interesting remains of Saracenic architecture, however, are still seen. K. is the chief emporium for the products of the interior. Carpets and colored morocco leather are manufactured, and cotton, wool, and skins are exported to Smyrna. Pop., including the suburbs, 50,000.

K., the ancient *Iconium*, was famous in ancient times as the cap. of Lycaonia. 1087–1299 it was the seat of a Seljuk sultanate. 1832, Dec. 20, a battle was fought here, in which Ibrahim Pasha completely defeated the Turkish army.

KÖNIG, *kõ'ních*, FRIEDRICH: 1775, Apr. 17—1833, Jan. 17; b. Eisleben: inventor of the steam-press. He became a printer, and was for a short time a bookseller, but was unsuccessful in this business. He eagerly prosecuted literary and scientific studies. Having applied himself to the invention of means of printing by machinery, he sought in vain the necessary pecuniary assistance in various quarters, his schemes being rejected as impracticable; but at last Thomas Bensley, printer in London, came forward to his support, a company was formed, and a patent was obtained 1810, Mar. 29, for a press which printed like the hand-press by two flat plates, and 1811 it was first used to print part of the *Annual Register*. A second patent was obtained 1811, Oct. 30, for a cylinder-press; a third 1813

KÖNIGGRÄTZ—KÖNIGSHÜTTE.

for improvements in it. This improved machine was soon adopted by the proprietors of the *London Times*. In the latter part of his life, K. was a partner in a company for making steam printing-presses at Oberzell, near Würzburg, Bavaria.

KÖNIGGRÄTZ, *kō'ničh-grêts*: town and fortress of Bohemia, on the left bank of the Elbe, at the confluence of the Adler with that river, 64 m. e.n.e of Prague. It is the seat of a bishop, and has a beautiful cathedral. Cloth, musical instruments, shoes, and wax-candles are manufactured. This town is famous for the signal victory gained by the Prussians over the Austrians 1866. The Austrians name the battle *Sádowa* from an adjoining village nearer the centre of the battlefield. Pop. (1880) 8,166.

KÖNIGINHOF, *kō'ničh-în-hōf*: small manufacturing town of Bohemia, on the left bank of the Elbe, 16 m. n. of Königgrätz. Linen-weaving, tanning, and manufactures of hats and sugar, are principal branches of industry. Pop. (1880) 6,813.

KÖNIGSBERG, *kō'ničhs-běrch*: small town of Prussia, province of Brandenburg, on the Rörike, 45 m. n. of Frankfurt-on-the-Oder. Tanning and distilling are the chief branches of industry. Pop. (1880) 6,568. [Numerous other places in Germany bear this name.]

KÖNIGSBERG: important town and fortress of Prussia, province of Prussia, on both banks of the Pregel, and on an island in that river, four m. from its entrance into the Frisches Haff. It consists of the Old Town and the Löbenicht on the n. bank (the latter of which, in its seven-storied and gabled houses, and steep side-lanes, still presents a completely Hanseatic appearance), the Kneiphof on the island (also one of the oldest parts), and numerous suburbs. The Pregel is here crossed by seven bridges. The origin of the town dates from the erection of a castle by Ottokar, King of Bohemia, 1257. K. became a member of the Hanseatic League 1365, and was the residence of the grand-master of the Teutonic Order 1457-1528. In 1701, Frederick, Elector of Brandenburg, was crowned here, with the title of Frederick I., King of Prussia. Its chief buildings are the cathedral, containing the tomb of Kant; the univ. founded 1544, and attended now by about 600 students; the united Royal and Univ. Library, 220,000 vols.; and the observatory. There are also three gymnasia, with numerous other educational and benevolent institutions. Important manufactures of woollens, silk, leather, and tobacco are carried on. The value of the imports (1875) was \$65,000,000; and of the exports \$55,000,000. Wine, fruits, coal, salt, and sugar are imported; grain is the chief article of export. Pop. (1858) 83,000; (1880) 140,909.

KÖNIGSHÜTTE, *kō'ničhs-hüt-té*: town in the dist. of Oppeln, Prussia, in the coal and iron region of Upper Silesia, about 55 m. s.w. of Oppeln. It has notable mineral baths. The largest iron-works in Silesia are at K.; founded 1797, long managed by the govt., now by a private company. It employed 1877 about 3,000 hands, and

KÖNIGSTEIN—KONRAD I.

its total product of all kinds of iron was about 115,000 tons. Pop. (1875) 26,040.

KÖNIGSTEIN, *kō'nīch-stīn*: town and fortress of Saxony, at the junction of the Biela and Elbe rivers, 18 m. s.e. of Dresden. The fortress is on the summit of a mass of rock 878 ft. above the Elbe, 1,111 ft. above sea-level, and is approachable only through a narrow passage hewn from the rock on the n.w. and strongly defended. Within it are bomb-proof casemates cut in the rock, capable of containing provisions for a garrison of 1,200 men for two years, and a well 600 ft. deep similarly excavated, from which water is obtained. Vegetables are cultivated on a small farm below the fortress. In times of war the crown jewels and royal treasure are deposited here for safe-keeping, and more than once the fortress has been a royal refuge. The post is garrisoned solely by Saxons, the king appointing one of his most trusty officers commander. Pop. of the town about 3,000.

KÖNIGSWART, *kō'nīchs-várt*: town of Bohemia, on a tributary of the Beraun, a branch of the Elbe, 79 m. w.s.w. from Prague. It is in a romantic valley, has a fine castle, belonging to Prince Metternich, mineral springs, and a bathing establishment. The old fortress was destroyed by the Swedes in the Thirty Years' War, and the site having been purchased by the imperial general, Count Metternich, 1618, he built a castle in Italian style, surrounded it with a fine park, and collected in it a fine library, with great treasures of paintings, antiquities, and objects of natural history. The altar of the richly-adorned chapel of the castle possesses many bones and other relics of saints, to which pilgrimages are made. Pop. 2,120.

KONRAD I., or **CONRAD I.**, *kōn'rad*, Ger. *kōn'rāt*, King of the Germans (title identical with the subsequent 'Emperor of Germany'): (reigned 911-18) d. 918; son of Konrad of Fritzlar, Count of Franconia; nephew of Emperor Arnulf. On the extinction of the direct line of the Carolingians, the Germans resolved to make the sovereign dignity elective, and preferring to choose one related to the late imperial family, offered the crown to Otho the Illustrious, Duke of Saxony, who refused it, but recommended K., who was accordingly elected 911. The new monarch gradually re-established the imperial authority over most of the German princes, carried on unsuccessful war with France, and at last fell mortally wounded at Quedlinburg, in a battle with the Hungarians, who had repeatedly invaded his dominions. He was buried at Fulda. On his deathbed, he enjoined his brother Eberhard to carry the imperial insignia to his mortal enemy, Duke Henry of Saxony, son of Otho the Illustrious, with whom he had been continually at war since 912, and accompanied the gift with the chivalrous message, 'that he wished to render to the son what he had received from the father.' K.'s reign was a remarkable epoch in the history of Germany; sovereignty by hereditary right was introduced into the German duchies and markgrafdoms; the minor

KONRAD II.—KONRAD III.

lords of the soil became vassals, not to the king, as formerly, but to their dukes; and finally, the crown-lands in each duchy were taken into possession by the dukes themselves, who thus totally destroyed the sovereign's local jurisdiction.

KONRAD II., King of the Germans, and Roman Emperor: (reigned 1024-1039, June 4) d. 1039, June 4; son of Henry, Duke of Franconia. He was elected after the extinction of the Saxon imperial family 1024, and is by many considered the founder of the Franconian dynasty. Immediately after his election, he commenced a tour through Germany, to administer justice and acquaint himself with, and to ameliorate, the condition of his subjects. With a view to this last, he instituted the *God's Truce* (q.v.). 1026, he crossed the Alps, chastised the rebellious Italians, was crowned at Milan as king of Italy, and he and his wife Gisela were anointed by the pope emperor and empress of the Romans. He was soon recalled to Germany to put down four formidable revolts, in which he succeeded so well, that peace was restored 1033. In 1032, he had succeeded to the kingdom of Burgundy, which he annexed to the empire. In 1036, a rebellion in Italy again compelled him to cross the Alps; but his efforts to restore his authority were this time unsuccessful, and he was forced to grant various privileges to his Italian subjects. Shortly after his return, he died at Utrecht. K. was one of the most remarkable of the earlier monarchs of Germany. He repressed the more obnoxious features of the feudal system, and by conferring the great duchies of Bavaria, Swabia, and Carinthia on his son, reduced the dangerous power of the great dukes of the empire.

KONRAD III., King of the Germans, founder of the Hohenstaufen (q.v.) dynasty: son of Frederick of Swabia. 1093-1152, Feb. 15 (reigned 1138, Feb. 21-1152). While under 20 years of age, K., with his elder brother Frederick, had bravely supported Henry V. against his numerous enemies, and in return, that monarch granted K. the investiture of the duchy of Franconia. K. subsequently contested the crown of Italy with Emperor Lothaire of Saxony, but was compelled to resign his pretensions. On the death of Lothaire, the princes of Germany, fearing the increasing preponderance of the Guelf party, and attracted by K.'s brilliant courage, moderation, and goodness, offered him the crown; and he was accordingly formally elected at Aix-la-Chapelle. He was immediately involved in a quarrel with Henry the Proud, Duke of Bavaria and Saxony, and head of the Guelf party in Germany; and the struggle was continued under Henry's son and successor, Henry the Lion (q.v.). While Germany was thus convulsed, the state of Italy was not more peaceable. The several belligerents besought K.'s assistance, but he well knew the natural inconstancy of the Italians, and stood aloof. Soon after this, St. Bernard of Clairvaux commenced to preach a new crusade, and K., seized with the general infatuation, set out for Palestine at the head of a large army (see CRUSADES) in company with his old enemy,

KONRADIN—KONRAD VON WÜRZBURG.

Guelf of Bavaria. Guelf returned to Germany before K., and with his nephew, Henry the Lion, immediately renewed the attempt to gain possession of Bavaria, but their army being defeated at Flochberg, they were compelled to sue for peace. K. was now called to aid the Duke of Poland against his rebellious subjects, and to aid the pope and the northern Italians against Roger of Sicily; but while preparing for the latter expedition, he was poisoned, and died at Bamberg. K. was largely endowed with the virtues necessary for a great monarch, and though himself unlearned, was a patron of science and letters. His marriage with a Greek princess was symbolized by the two-headed eagle which figured on the arms of the Emperor of Germany, and now appears on the arms of the sovereign of Austria, as heir to the German emperors.

KONRADIN OF SWABIA, *kōn'rá-dīn ōv swā'bē-a*: last descendant of the imperial House of Hohenstaufen (q.v.): 1252-1268, Oct. 20; son of Konrad IV., born two years before his father's death. Innocent IV. immediately seized the young prince's Italian possessions, on the plea *that the son of a prince who dies excommunicated has no hereditary rights*; and the other enemies of the House of Hohenstaufen rejoiced to follow the pope's example. K. was not left, however, totally friendless. His uncle Manfred took up arms in his behalf, drove the pope from Naples and Sicily, and in order to consolidate his nephew's authority, declared himself king till the young prince came of age. The pope's inveterate hatred of the Hohenstaufens induced him to offer the crown of the Two Sicilies to Charles of Anjou, a consummate warrior and able politician. Charles immediately invaded Italy, met his antagonist in the plain of Grandella, where the defeat and death of Manfred, 1266, gave him undisturbed possession of the kingdom. But the Neapolitans, detesting their new master, sent deputies to Bavaria to invite K., then in his 16th year, to come and assert his hereditary rights. K. accordingly appeared in Italy at the head of 10,000 men, and being joined by the Neapolitans in large numbers, gained several victories over the French, but was finally defeated, and with his relative, Frederick of Austria, taken prisoner near Tagliacozzo, 1268, Aug. 22. The two unfortunate princes were, with the consent of the pope, put to death in the market-place of Naples Oct. 20. K., on the scaffold, a few minutes before the execution, took off his glove, and threw it into the midst of the crowd, as a gage of vengeance, requesting that it might be carried to his heir, Peter of Aragon. This duty was undertaken by the Chevalier de Waldburg, who, after many hair-breadth escapes, succeeded in fulfilling his prince's last command. See SICILIAN VESPERS.

KONRAD VON WÜRZBURG, *kōn'rát fōn vūrts'bōrch*: one of the most celebrated poets of the middle ages: died at Basel 1287. K. is fertile in imagination, learned, and—although marking the decline of mediæval High-German poetry by his prolix and artificial style—probably the most perfect master of German versification that had appeared

KOOCHLA—KODDOO.

up to his own day. He followed the line marked out by Gottfried of Strasbourngh. K. appears to most advantage in his smaller narrative poems, of which the best is *Engelhard* (reprinted by Haupt, Leipsic 1844, from an old and scarce impression). Next to this may be ranked his *Otto mit dem Bart* (reprinted by Hahn at Quedlinb. and Leip. 1838); *Der Welt Lohn* (by Roth, Fkr. 1843); *The Legends of Sylvester* (by W. Grimm, Gött. 1841) and of *Alexius* (by Massmann, Quedlinb. and Leip. 1843); *Die Goldene Schmiede* (by W. Grimm, Berl. 1840). His songs and proverbs are in Hagen's *Minnesinger*.

KOOCHLA, n. *kôch'lă* [native name]: the poison-nut tree of the Malabar and Coromandel coasts; the *Strychnos nux-vomica*, ord. *Loganiacæ*.



Koodoo (*Antelope strepsiceros*).

KODDOO, *kó'dô* (*Antelope strepsiceros*, or *Strepsiceros koodoo*): one of the largest species of antelope. The general form is not so light and elegant as that of many of the antelopes. The height is about four ft., length fully eight ft., exclusive of the tail, which is moderately long, and terminates in a tuft like that of an ox. The male is furnished with great horns, nearly four ft. long, and beautifully twisted in a wide spiral of two turns and a half, very thick at the base, and there wrinkled and ringed. The female is smaller than the male, and hornless. The general color is grayish brown, with a narrow white stripe along the middle of the back, and eight or ten similar stripes proceeding from it down the sides. The K. lives in small families of four or five, inhabiting chiefly the wooded parts of s. Africa. It is easily domesticated, and is one of the animals which, probably, man has not yet done enough to reduce to his service.

KOOFÄ—KORÄES.

KOOFÄ, or KU'FA: see KUFIC WRITING.

KOOMAS'SIE: see COOMASSIE.

KOOM'RAH (*Equus hippagrus*): alleged distinct species of the family *Equidæ*, native of n. Africa, inhabiting mountain woods. It is ten or ten and a half hands high; with a broad deep head; no forelock, but long woolly hair down to the eyes; long black mane; tail more like that of a horse than of an ass; the color a uniform reddish bay, without mark or streak. Col. Hamilton Smith supposes that it may be the *Boryes* of Herodotus, and *Hippagrus* of Oppian.

KOONBEE, or KUNBI, n. *kôn'bê* [Mahratta]: the agricultural caste. One of the great castes in the Mahratta country of w. and central India.

KOOR, or KUR: see KURA.

KOORDISTAN': see KURDISTAN.

KOORIA MOORIA ISLANDS, *kô'ri-a mô'ri-a*: group of six islands, on the s. coast of Arabia, about 21 m. from the coast, about lat. 17° 33' n., long. 56° 6' e. The surface is sterile, and only one is inhabited, supporting only from 20 to 30 fisherman. They were ceded to England 1854. A little guano of inferior quality has been obtained from them.

KOO'RILE ISLANDS: see KURILE ISLANDS.

KOORSEE, or KURSI, n. *kôr'sê*: the Mohammedan seventh heaven, supposed to be crystalline, and to constitute the judgment-seat of God.

KOORSK: see KURSK.

KOOS'SO, or Cos'so: see CUSO.

KOP, n. *köp* [Dut.]: in s. Africa, a hill; a headland. KOPJE, n. *köp'jê*, a little hill. KRANS KOP, *kränz* [Dut.]: a precipitous hill.

KOPECK, or KOPEK, or COPECK, n. *kô'pêk*: Russian copper coin, the one-hundredth of a rouble (q.v.), equivalent to 1½ farthings sterling, or nearly a cent federal money.

KORÄES, DIAMANTES: see CORAIS, ADAMANTIOS.

KORAN.

KORAN, n. *kō-rān'* or *kō-rāwn'* [Ar. *al-kurān*, the book—from *qara-a*, he read]: the Mohammedan book of faith and worship—often written *Alcoran*, i.e., *The Reading*, by eminence; a term first applied to every single portion of Mohammed's 'Revelations;' later, used for a greater number of these; finally for their whole body, gathered together into the one book, which forms the religious, social, civil, commercial, military, and legal code of Islam. The K. is known also under the name of *Forkan* (Chald. Salvation, not from Hebr. *Perek*, Division, as erroneously supposed); further, of *Al-Moshaf* (*The Volume*), or *Al-Kitab* (*The Book*, in the sense of 'Bible'), or *Al-Dhikr* ('the Reminder,' or 'the Admonition'). The K. is, according to the Moslem creed, coeval with God, uncreated, eternal. Its first transcript was written from the beginning in rays of light upon a gigantic tablet resting by the throne of the Almighty; and upon this tablet are found also the divine decrees relating to things past and future. A copy of it, in a book bound in white silk, jewels, and gold, was brought down to the lowest heaven by the angel Gabriel, in the blissful and mysterious night of *Al-Khadr*, in the month of *Ramadân*. Portions of it were, during a space of 23 years, communicated to Mohammed, both at Mecca and Medina, either by Gabriel in human shape, 'with the sound of bells,' or through inspirations from the Holy Spirit, 'in the Prophet's breast,' or by God himself, 'veiled and unveiled, in waking or in the dreams of night.' Traditions vary with respect to the length of the individual portions revealed at a time, between single letters, verses, and entire chapters or *Surahs* (from Heb. *shurah*, line). The first revelation forms, in the present arrangement of the book, verses 1-5 of *surah xcvi.*, and begins with the words: 'Read (preach), in the name of thy Lord, who has created all things!'

Mohammed dictated his inspiration to a scribe, not, indeed, in broken verses, but in finished chapters, and from this copy the followers of the Prophet procured other copies—unless they preferred learning the oracles by heart from the master's own mouth. The original fragments were, without any attempt at chronological or other arrangement, promiscuously thrown into a box, and a certain number were entirely lost. A year after the death of Mohammed, the scattered portions were, at the instance of Abu Bekr, collected by Zaid Ibn Thâbit of Medina, 'from date-leaves and tablets of white stone, bones, and parchment-leaves, and the breasts of men,' and faithfully copied, without the slightest attempt at molding them into shape or sequence, together with all the variants, the repetitions, and the gaps. This volume was intrusted to the keeping of Hafsa, one of the Prophet's wives, the daughter of Omar. A second redaction was instituted in the 30th year of the *Hedjrah*, by Caliph Othman, not for the sake of arranging and correcting the text, but to restore its unity: many different readings being current among the believers. He ordered new copies to be made from the original fragments, in which all the variants were to be expunged, without, however, any further alteration, such as the suppression of certain pas-

KORAN.

sages, etc.; and all the old copies were consigned to the flames. As to the succession of the single chapters—114 in number—no attempt was made at establishing continuity, but they were placed side by side according to their respective lengths; so that, immediately after the introductory fat-tah or exordium, follows the longest chapter, and the others are ranged after it in decreasing size. They are not numbered in the manuscripts, but bear distinctive, often strange-sounding headings, as: the Cow, Congealed Blood, the Fig, the Star, the Towers, Saba, the Poets, etc., taking from a particular matter or person treated of in the respective chapters. Every chapter or surah begins with the introductory formula: 'In the name of God, the Merciful, the Compassionate.' It is further stated at the beginning whether the surah was revealed at Mecca or at Medina. Every chapter is subdivided into smaller portions (*Ayath*, Heb. *Oth*, sign, letter), varying in the ancient 'seven editions' or primitive copies [of Medina (two), Mecca, Kufa, Basra, Syria, and the 'Vulgar Edition']—reduced by Nöl-deke to four editions—between 6,000 and 6,036 portions. The number of words in the whole book is 77,639, and an enumeration of the letters shows 323,015 of these. Other—encyclical—divisions of the book are: into thirty ajzâ and into sixty ahzâb, for the use of devotional readings in and out of the mosque. 29 surahs commence with certain letters of the alphabet, supposed to be of mystical purport.

For the contents of the K., as the basis of Mohammedanism, see MOHAMMEDANISM: for questions more closely connected with authorship and chronology, see MOHAMMED. Briefly, it is here stated that the chief doctrine laid down in it is the unity of God, and the existence of but one true religion, with changeable ceremonies. When mankind turned from it at different times, God sent prophets to lead them back to truth: Moses, Christ, and Mohammed being the most distinguished. Both punishments for the sinner and rewards for the pious are depicted with great diffuseness, and exemplified chiefly by stories taken from the Bible, the Apocryphal writings, and the Midrash. Special laws and directions, admonitions to moral and divine virtues, particularly to a complete and unconditional resignation to God's will (see ISLAM); legends, relating principally to the patriarchs, and, almost without exception, borrowed from the Jewish writings (known to Mohammed by oral communication only, a fact which accounts for their often odd confusion), form the bulk of the book, which throughout bears most palpable traces of Jewish influence. Thus, of ideas and notions taken bodily, with their Arabicized designations, from Judaism, are—Koran = Mikrah (Reading); Forkan (Salvation); the introductory formula, Bismillah (in the name of God); Torah (Book of Law); Gan Eden (Paradise); Gehinnom (Hell); Haber (Master); Darash (to search the Scriptures); Rabbi (Teacher); Sabbath (Day of Rest); Shéchinah (Majesty of God); Mishnah (Repetition, or Oral Law), etc. The general tendency and aim of the K. is clearly indicated in the beginning of chap. ii: 'This is the book in which there is no doubt; a guidance for the pious,

KORAN.

who believe in the *mysteries of faith*, who perform their *prayers*, give *alms* from what we have bestowed upon them; who believe in the *revelation* which we made unto thee, which was sent down to the *prophets before thee*, and who believe in the *future life*, etc.' To unite the three principal religious forms which Mohammed found in his time and country—viz., Judaism, Christianity, and Heathenism—into one, was Mohammed's ideal; and the K. properly read, discloses constantly the alternate flatteries and threats aimed at each of the three parties. No less are certain abrogations on the part of the Prophet himself, of special passages in the K., due to the vacillating relation in which he at first stood to the different creeds, and the concessions first made, and then revoked. Witness the 'Kiblah,' or the place where the believer was to turn in his prayer, first being Jerusalem; fasting, being at first instituted in the ancient manner; forbearance to idolaters forming one of the original precepts, etc.

The language of the K. is of surpassing elegance and purity, so much so, that it has become the ideal of Arabic classicality, and no human pen is supposed capable of producing anything similar:—a view adduced by Mohammed himself as a clear proof of his mission. The style varies considerably; sometimes concise and bold, sublime and majestic, impassionate, fluent, and harmonious; at other times verbose, sententious, obscure, tame, and prosy; and on this difference modern investigators have endeavored to form a chronological arrangement of the K., wherever other dates fail. But none of these attempts can ever be successful. Full manhood, approaching age, and declining vigor, are not easily traced in the writings of a man like Mohammed. The K. is written in prose, yet the two or more links of which generally a sentence is composed, rhyme with each other, a peculiarity of speech used by the ancient soothsayers (Kuhhân = Cohen) of Arabia:—only that Mohammed used his own discretion in remodelling its form, and freeing it from conventional fetters; and thus the rhyme of the K. became an entirely distinctive rhyme. Refrains are introduced in some surahs; and plays upon words are not disdained.

The outward reverence in which the K. is held throughout Mohammedanism, is exceedingly great. It is never held below the girdle, never touched without previous purification; and an injunction to that effect is generally found on the cover which overlaps the boards, according to Eastern binding. It is consulted on weighty matters; sentences from it are inscribed on banners, doors, etc. Great lavishness is displayed in the material and the binding of the sacred volume. The copies for the wealthy are sometimes written in gold, and the covers blaze with gold and precious stones. Nothing is more hateful in the eyes of a Moslem than to see the book in the hands of an unbeliever.

The K. has been commented upon so often that the names of the commentators alone would fill volumes. Thus, the library of Tripoli, in Syria, is reported to have

KORDOFAN.

once contained no less than 20,000 different commentaries. The most renowned are those of Samachshari (died 539 H.), Beidhavi (died 685 or 716 H.), Mahalli (died 870 H.), and Soyuti (died 911 H.). The principal editions are those of Hinkelmann (Hamburg 1694), Maracci (Padua 1698), Flügel (3d ed. 1838), besides many editions (of small critical value) printed in St. Petersburg, Kasan, Teheran, Calcutta, Cawnpore, Serampore, and the many newly-erected Indian presses. The first, but very imperfect, Latin version of the K. was made by Robertus Retensis, an Englishman, 1143 (ed. Basle 1543). The principal translations are those into Latin of Maracci (1698); into English, Sale (1734), Rodwell (1862), Palmer (1880); into French, Savary (1783), Garcin de Tassy (1829), Kasimirski (1840); into German, Megerlin (1772), Wahl (1828), Ullmann (1840); besides the great number of Persian, Turkish, Malay, Hindustanee, and other translations for the use of various eastern Moslems. Among concordances to the K. are that of Flügel (Leip. 1842), and the Noojoom-ool-Foorkan (Calcutta 1811). Of authorities whose works may be consulted on the K., are to be named chiefly, Maracci, Sale, Savary, Wahl, Geiger, Amari, Sprenger, Muir, Weil, Nöldeke.

KORDOFAN, *kawr-dō-fân'* (the White Land): lately a province of the Egyptian Sudan (q.v.); bounded e. by the White Nile, which separates it from Sennaar; and separated on the w. from Darfur by a strip of desert; lat. 10°—15° 20' n.; area of its more or less cultivated portion estimated at 12,000 sq. m.: pop. at 400,000. The province is traversed by no rivers; wells, however, abound, water being found almost everywhere, at comparatively small depth. In the s., the surface is undulating, and the soil argillaceous and productive; and here dourra and maize are grown. In the n. and w., the surface is an elevated plateau, and the soil sandy, but peculiarly fitted for the cultivation of millet, the staple article of food. The employments of the people are chiefly agricultural. In the s., horned cattle and horses are extensively reared, but in the n. and w., the nomad inhabitants depend for support entirely on their large herds of camels, which are hired out for transport of produce and merchandise. The chief trees are acacias, yielding gum-arabic. Gum-trees, scrub, mimosas, thorny plants, and prickly grass abound, but there is no forest timber. Iron ore is obtained and wrought in the country. About half the population is settled in about 900 villages; and nearly half is nomadic. The aborigines belong mainly to the Nuba stock, intermediate between the Negro and Hamite races, but with negro speech; and are mainly pagans. But there is a large element of nomad and slave-hunting 'Arabs,' Moslems in faith.

The capital is Il-Obeid (q.v.). In the end of last century, the Sultan of Darfur overran the province, and annexed it. Under the sultan, the inhabitants were but lightly taxed, and trade was opened with the Sudan and Arabia. This period of prosperity was brought to a close by the invasion of K., 1821, by an Egyptian army. For the rising of K.

KORIGAN—KOSCIUSKO.

under the Mahdi against the Egyptians, 1881-84, see **EGYPT** (end of the article).

KORIGAN, or **KORRIGAN**, n. *kw'î-gan* [Armoric]: in *Celt. myth.*, nine fays with long flowing hair and deadly breath, haunting fountains in Brittany.

KÖRNER, *kör'nér*, **KARL THEODOR**: 1791, Sep. 23—1813, Aug. 26; b. Dresden: patriotic German poet. After publication of some immature verses 1810, he entered the Univ. of Leipsic, but having no aptitude for serious and solid studies, was led into irregularities, which necessitated his leaving the university. After a short residence in Berlin, he went to Vienna, and began to write for the stage. His *Der Grüne Domino* (The Green Domino), *Die Braut* (The Bride), and *Der Nachtwächter* (The Night-watchman), are among the best German comedies. His two most important dramas, *Zriny* and *Rosamunde*, though destitute of that sagacity of thought and knowledge of mankind which are essential to the permanent success of such works, are full of noble enthusiasm. The uprising of the German nation against the despotism of Napoleon, inspired K. with patriotic ardor. He joined the army of liberation, and showed heroic courage in many encounters. The songs which he then wrote—several of them in the camp—published under the title of *Leier und Schwert* (Lyre and Sword), stirred his countrymen mightily. Their chief power lies probably in their impassioned nationality; foreigners at least fail to recognize in them much more, yet the Germans, remembering his bright youth and heroic death, regard them with a sacred admiration that forbids criticism. The most famous of these pieces is *Schwert-Lied* (Sword-Song), written in his pocket-book at early morning of the day when he was killed in battle near Rosenberg. A collected ed. of his works (*Sämmtliche Werke*, 1 vol. Berl. 1834; 4 vols. 1842, 4th ed. 1853) was published by Streckfuss. A biography, written by his father, has been translated into English, 'with selections from his poems, tales, and dramas,' by G. F. Richardson (Lond. 2 vols. 1845).

KÖRÖS, **NAGY**, *nődj kö-rôsh'*, or **GREAT KÖRÖS**: important market-town of Hungary, county of Pesth, in a sandy district, 49 m. s.e. of the city of Pesth. Black cattle and sheep are extensively reared, and an excellent red wine is grown. Pop. (1880) 22,769.

KISS KÖRÖS, or **Little KÖRÖS**, is a small town, 38 m. s.w. of Nagy KÖRÖS; pop. (1880) 6,834.

KOROTCHA, *kô-rô'chá*, or **KAROTCHA**, *ká-rô'chá*: town of Russia, on the small river K., in the govt. of Kursk, 75 m. s.e. of Kursk. The town is well built, and has several churches. Saltpetre is manufactured, and there is trade in apples. Pop. 6,560.

KOR'VEI: see **CORVEI**.

KOSCIUSKO, **MOUNT**: highest peak of the Australian Alps, 7,176 ft. high, on the boundary between New South Wales and Victoria, midway between the cities of Sydney

KOSCIUSKO—KÖSLIN.

and Melbourne, about lat. $36^{\circ} 30' \text{ s.}$, long. $134^{\circ} 30' \text{ w.}$ The Murray and Murrumbidgee rivers rise near its base, and the entire mount affords beautiful scenery.

KOSCIUSKO, *kōs-si-ūs'kō* (or KOSCIUSKO, *kōsh-chōsh'ko*), TADEUSZ (THADDEUS): great Polish general and patriot; 1746–1817, Oct. 17; b. in the province of Minsk, w. Russia; descended from an ancient and noble, though not wealthy Lithuanian family. He became a capt. in the Polish army, and went with the French fleet to America, and served in the War of Independence, in which he showed great valor, and was made brig. general. He returned to Poland 1786. In the campaign of 1792, he held a position at Dubjenka for five days with 4,000 men against 16,000 Russians, though he had had only 24 hours to fortify it, and finally withdrew his troops with little loss. This brilliant feat laid the foundation of his military reputation. When King Stanislaus submitted to the will of the Empress Catharine, K. resigned his command, and retired to Leipzig; but returned 1794, and put himself at the head of the national movement in Cracow, and afterward in Warsaw. With 20,000 regular troops, and 40,000 ill-armed peasants, he resisted for months the united Russian and Prussian army of 150,000 men. He was proof also against the most tempting proposals on the part of the Prussian king. He was at last overpowered by superior numbers in the battle of Maciejowice, 1794, Oct. 10, and fell from his horse, covered with wounds, and uttering the words, '*Finis Polonia.*' He was kept a prisoner till after the accession of Emperor Paul, who restored him to liberty, gave him an estate with 1,500 peasants, and handed to him his sword, which K. declined to receive, saying: 'I have no more need of a sword, as I have no longer a country.' He afterward resigned the estate, and sent back from London the money which he had received from the emperor. He spent the remainder of his life chiefly in France, and his chief enjoyment was in agricultural pursuits. When Napoleon, 1806, formed a plan for the restoration of Poland, K. felt himself restrained from taking an active part in it by his promise to Emperor Paul: the address to the Poles, published in his name in the *Moniteur*, was a fabrication. In 1814, he wrote to Emperor Alexander, entreating him to grant an amnesty to the Poles in foreign countries, and to make himself constitutional king of Poland. He released from servitude, 1817, the peasants on his own estate in Poland. His death was in consequence of his horse falling over a precipice. His remains were removed to Cracow by Emperor Alexander, and were laid side by side with those of John Sobieski. See the biographies by Falkenstein (1834), Chodzko (1837), and Paszkowski (Cracow 1872).

KÖSLIN, *kōs-lēn'*: manufacturing town of Prussia, the province of Pomerania, on the Mühlenbach, 7 m. from the Baltic Sea, 85 m. n. e. of Stettin. There are iron foundries, and manufactures of paper, tobacco, etc. Pop. (1880) 16,834.

KOSLOV—KOSSUTH.

KOSLOV': see KOZLOF.

KOSMOS: see COSMOS.

KOSSUTH, *kōsh'ót*, LAJOS (LOUIS): leader of the Hungarian revolution: b. 1802, Monok, county of Zemplin, Hungary. His family is of noble rank, though his parents were poor. He studied law at the Prot. college of Sarospatak, and practiced first in his native county, afterward at Pesth. He began his political career at the diet of Presburg 1832, as editor of a liberal paper, which, owing to the state of the law, was not printed, but transcribed and circulated. The subsequent publication of a lithographed paper led, 1837, May, to K.'s imprisonment. He was liberated 1840, and became again the editor of a paper, in which he advocated views too extreme for many of the liberal party among the nobles, but which took strong hold of the people in general, especially of the youth of the country. 1847, Nov., he was sent by the county of Pesth as deputy to the diet, and soon distinguished himself as a speaker, and became the leader of the opposition. He advocated the emancipation of the peasants, the elevation of the citizen class, the freedom of the press, etc., and after the French revolution of 1848, openly demanded an independent government for Hungary, and constitutional government in the Austrian hereditary territories. To his speeches must in great part be ascribed not only the Hungarian revolution, but the insurrection in Vienna, 1848, March. On the dissolution of the ministry 1848, Sep., he found himself at the head of the Committee of National Defense, and now prosecuted with extraordinary energy the measures necessary for carrying on war. To put an end to all the hopes and schemes of the moderate party, he induced the national assembly at Debreczin, 1849, Apr., to declare the independence of Hungary, and that the Hapsburg dynasty had forfeited the throne. He was now appointed provisional gov. of Hungary; but being disappointed in his hopes for the intervention of the Western Powers, and finding the national cause jeopardized by the entrance of Russia on the scene of action, he endeavored to arouse the people to a more desperate effort. The attempt was vain. Finding that the dissensions between himself and Görgei (q.v.) were damaging the national cause, he resigned his dictatorship in favor of the latter. After the defeat at Temesvar 1849, Aug. 9, he found himself compelled to abandon his position, and to flee into Turkey, where, however, he was made prisoner; but though his extradition was demanded both by Austria and Russia, the Porte, true to the principle of hospitality, resisted their demands. In 1851, Sep., he was liberated, and the govt. of France refusing him a passage through their territory, he sailed in an American frigate to England, where he was received with every demonstration of public respect and sympathy. In Dec. he landed in the United States, where he met a most enthusiastic reception. He returned 1852, June, to England, and there chiefly he resided, until Sardinia and France prepared for war with

KOSTROMA—KOTZEBUE.

Austria; when, on condition of something definite being done for Hungarian independence, he proposed to Napoleon to arrange a Hungarian rising against Austria. The peace of Villafranca bitterly disappointed Kossuth. He has since lived in Turin. See *Memories of My Exile*, by K. (Lond. 1880).

KOSTROMA, *kös-trō'ma*: government of Great Russia, bounded w. by the govt. of Jaroslav, and e. by the dist. of Kazan; 30,834 sq. m. The surface is generally flat, marshy, interspersed with lakes, and, especially in the n. and e., with extensive and dense forests. The greater part of the soil is uncultivated. The chief rivers are the Volga, with its tributaries the Kostroma, the Unja, and the Vetluga. The climate is severe. Agriculture is the principal occupation of the inhabitants, and sufficient grain is produced for local consumption. Flax and hemp are extensively cultivated; mats, pitch, tar, and potash are largely manufactured and exported; and there is flourishing trade in timber. Pop. (1880) 1,251,718.

KOSTRO'MA: capital of the govt. of K., Russia, near the junction of the Kostroma with the Volga, 564 m. from St. Petersburg. K. has considerable manufactures, chiefly of linen, and trades in corn, tallow, timber, linseed oil, and leather. Pop. (1880) 30,405. •

KÖSZEGH': see GÜNS.

KOTAH, *kō'tā*: chief town of the protected state of K., in Rajpootana, on the right bank of the Chambal; fortified with a rampart and ditch. The situation is not healthful; but the town has some wealth and some architectural pretensions. In 1857, notwithstanding the fidelity of the rajah to the British govt., K. fell under the power of the mutineers, remaining in their possession until 1858, Mar. 30, when it was stormed by Gen. Roberts. Pop. (1881) 40,270.

The *state* of K. contains 3,797 sq. m.: pop. estimated 517,275.

KOTH, n. *kōth*: a name given by the Spaniards to an earthy slimy substance of a blackish-brown color, ejected from the volcanoes of S. America.

KOTT'BUS: see COTTBUS.

KOTZEBUE, *kot'sēh-bō*, AUGUST FRIEDRICH FERDINAND VON: prolific German dramatist: 1761, May 3—1819, Mar. 23; b. Weimar. After a checkered life, first in Russia, afterward in Austria and Germany, he was assassinated at Mannheim, on account of his hostility to the liberal movement. He received honors and offices from the Russian emperor, and was for a time under Russian pay in some secret service. Lively characterization and sprightly dialogue gave popularity to his dramas (the chief merit of which consists in their superior knowledge of stage-effect). Among them are *Die Indianer in England* (The Indians in England), *Menschenhass und Reue* (Misanthropy and Repentance)—the latter, under the title *The Stranger*, being well known on the English boards—*Die beiden Klingsberg* (The Two

KOUBA—KOZLOF.

Klingsbergs), *Die Spanier in Peru*, etc. K. wrote 98 dramas, which have been collected in editions of 28 vols. (Leip. 1797-1823) and of 44 vols. (1827-29). Several have been translated into English.

KOUBA, *kó'bá*: town in the s. of Asiatic Russia, on the e. slope of the Caucasus, in the govt. of Baku, 55 m. s.s.e. of Derbend; lat. $41^{\circ} 22'$ n., long. $48^{\circ} 31'$ e. It was annexed to Russia 1806. Agriculture, fishing, rearing of silk-worms, and trade with Astrakhan and Persia chiefly employ the inhabitants. Pop. (1880) 13,062.

KOUBAN, *kó-bán'*: river in s. Russia, rising on the declivity of Mt. Elburz, and flowing first n., then w., separating the govts. of Stavropol and the Cossacks of the Black Sea from Circassia. It is about 400 m. in length, exclusive of its windings, and empties partly into the Black Sea, partly into the Sea of Azov.

KOU'LI KHAN: see NADIR SHAH.

KOU'MISS: see KUMISS.

KOUSNETZK, *kós-nětsk'*: town of Russia, on the n. border of the govt. of Saratov, 110 m. n.n.e. of the town of Saratov. The people are employed chiefly in bee-keeping and in woollen manufactures. Pop. (1880) 14,186.

KOVNO, *kóv'nó*: government in w. Russia, immediately s. of the province of Courland; bounded s.w. by Prussia and Poland; 15,650 sq. m., not more than one-third of which is cultivated, and about one-third under wood. Flax and honey are important products. The surface is flat and marshy, and there are numerous lakes. The chief rivers are the Niemen, with its tributaries the Vilia, Neveja, and Doubissa. Plica Polonica (q. v.) is common among the peasantry. Previous to 1843, this govt. formed a part of that of Wilna. Pop. (1880) 1,403,079.

KOV'NO: capital of the govt. of K., European Russia, near the confluence of the Vilia and the Niemen; founded in the 10th c., the scene of many bloody conflicts between the Teutonic Knights and the Poles, in the 14th and 15th c. Its commerce is insignificant, notwithstanding its advantages of situation near the confluence of two navigable rivers, and on the great railway from St. Petersburg to Berlin. Pop. (1880) 42,227.

KOWTOW, *kow-tow*, or *Korou'*, n. *kō*: the mode of saluting the emperor of China, by prostration before him on all fours, touching the ground with the forehead nine times.

KOZELSK, *kō-zělsk'*: district town of Great Russia, govt. of Kaluga, 40 m. s.w. of the town of Kaluga. It is on the right bank of the river Jisdra. It has great trade in hemp, and an extensive manufacture of sail-cloth. K. is famous in history for the brave but unsuccessful resistance made here to Batu-Khan of Kiptchak. Pop. (1880) 13,406.

KOZLOF, *kōz-lŏf'*: town of Russia, govt. of Tambov; advantageously situated on the Voronetz. It is flourishing,

KRAAL—KRAPOTKINE.

and has numerous woolen, linen, and other factories. Pop. (1880) 25,522.

KRAAL, n. *kraal* [Dut. *kraal*, a village, an inclosure]: a village or collection of huts among the Hottentots or Kafirs of s. Africa; an inclosure for cattle in Cape Colony.

KRAGUJEVATZ, *krá-gó'yê-vátz*: town of Servia, on the Lopenitza, having an important arsenal and gun-factory. Pop. (1874) 6,663.

KRAJOVA, *krá-yô'vá*: town of Roumania, in Little Wallachia, near the e. bank of the Schyl, 120 m. w. of Bucharest. It is the residence of many rich bojars (nobles), and has considerable commerce. Pop. 25,000.

KRAKATO'A: see VOLCANOES.

KRAKEN, n. *krá'kn* [Norwegian]: fabulous water-animal of enormous bulk, described first by Bp. Pontoppidan in his *Natural History of Norway*, and from time to time said to have been seen in the Norwegian seas. Immense magnitude is ascribed to it; it is said to rise from the sea like an island, to stretch out mast-like arms, by which ships are readily drawn down, and, when it sinks again into the deep, to cause a whirlpool, in which large vessels are involved to their destruction. The fable of the K. is not to be summarily rejected as unmingled fable. There may, perhaps, be some foundation for it in the occasional appearance of huge cephalopods, to the general characters of which the description given of its form and monstrous arms sufficiently agrees, exaggeration as to size being of course allowed for. Large as are some of the cephalopods known to exist in some seas, there are reasons for supposing that creatures of this kind do exist much larger than any that have been accurately described; and stories, similar to the Norwegian ones recorded by Pontoppidan and others, are current in different parts of the world. Such is the story told by Pliny concerning a vast animal with prodigious arms which impeded the navigation of the Strait of Gibraltar. [See Octopus under POULPE.]

KRAME'RIA: see RATTANY ROOT.

KRAN'ACH, LUCAS: see CRANACH.

KRAPINA: town of the Austrian Empire, province of Croatia, on the river K., a branch of the Save, at the s. base of the Ivanica Mountains, 140 m. s.s.e. of Vienna. The surrounding country is very fertile, abounding in corn and wine; and the town has of late rapidly increased in size.

KRAPOTKINE, *krá-pot'kín*, Prince PETER: author: b. Moscow, 1842, Dec. 9. He is a member of one of the oldest and noblest families of Russia; was reared in luxury; began studying the natural sciences when 17 years old; studied in the universities of St. Petersburg, Moscow, Kharkoff, and other cities; became an authority on geology; was many years sec. of the Imperial Russian Geographical Soc., and conducted a scientific exploration of Siberia and Finland; was arrested as a nihilist and sentenced to imprisonment for life in the fortress of SS. Peter

KRASNOVODSK—KRAZINSKI:

and Paul, St. Petersburg, 1877; made his escape and went to Geneva, where he espoused the cause of the revolutionary party and was expelled 1881; joined the French revolutionary federation in Lyons; and was arrested, condemned to 5 years' imprisonment, and heavily fined 1883. Here his health completely broke down, and at the request of some of the most noted men of science, letters, and art in the world, Pres. Grévy released him 1886. He has applied himself since to literary work. He has contributed for years to the chief scientific and geographical publications of Russia, France, and England, and nearly all the articles on Russian geography in the new edition of the *Encyclopædia Britannica* were written by him.

KRASNOVODSK, *krás-nō-vōdsk'*: Russian military station on a promontory on the e. side of the Caspian Sea, in the Trans-Caspian territory. It is opposite Baku, with which it is joined by submarine telegraph; and is near the railway to Askabad. From it several important Russian expeditions have started.

KRASNOYARSK, *krás-nō-yársk'*: chief town of the Siberian govt. of Yeniseisk, on the Upper Yenisei, 3,200 m. from St. Petersburg. Pop. (1880) 14,159.

KRAUTH, *krawth*, CHARLES PORTERFIELD, S.T.D., LL.D.: 1823, Mar. 17—1883, Jan. 2; b. Martinsburg, Va.: Lutheran clergyman. He graduated at Pennsylvania College, Gettysburg, 1839, and at the Lutheran Theol. Seminary there 1841; was ordained 1842; held various pastorates till 1875; was editor of the *Lutheran and Missionary* 1861-67, Norton prof. of systematic theology and ecclesiastical polity in the Lutheran Seminary, Philadelphia, 1864-83; prof. of mental and moral science in the Univ. of Pennsylvania 1868-83; and vice-provost there 1873-83. He was a member of the committee on the revision of the Old Test., of the American Bible Society's committee on versions, the American Philosophical and Oriental Societies, and the Penn. Historical Soc., was an organizer of the general council of the Lutheran Church in America 1869, its pres. 1870, and chairman of its committee on constitution; and was author of more than 100 important publications. He received the degrees S.T.D. 1856, and LL.D. 1874, from Pennsylvania College.

KRAYO'VA: see KRAJOVA.

KRAZINSKI, *krá-zhîn'skē* VALERIAN, Count: abt. 1780-1855, Dec. 22; scion of an illustrious Polish family that had early adopted the Prot. religion. He was appointed one of the chief officials in the bureau of public instruction for Poland, and strenuously exerted himself to promote education among the various classes of dissenters. When the Poles rebelled 1830, and set up an independent government, K. was sent as their representative to London, where, from 1831, he remained an exile for 20 years, and then removed to Edinburgh, where he died. His works are of considerable authority on Slavonic history and literature the chief are—*The Rise, Progress, and Decline of the Reformation in Poland* (Lond. 2 vols. 1839-40), *Lectures on*

KREASOTE—KREMSIER.

the Religious History of the Slavonic Nations (Lond. 1849), *Montenegro and the Slavonians in Turkey* (Edin. 1853); with some translations, religious works, and political pamphlets on Poland.

KREASOTE, or KREOSOTE: see CREASOTE.

KREATIN, or KREATINE, n. *krě'ä-tin*, and KREATININ, or KREATININE, n. *-i-nin*, peculiar nitrogenous, crystallizable substances: see CREATIN: CREATININ.

KREEL: see CREEL.

KREFELD, *krä'fělt*: important manufacturing town of Rhenish Prussia, 12 m. n.w. of Düsseldorf. It owes its importance to the settlement here in the 17th and 18th c. of numerous refugees, from religious persecution in neighboring countries, who established here the silk and velvet manufactures for which K. is now the most noted town in Prussia. In 1882, the number of looms in the silk and velvet manufacture was 35,692, and the value of the fabrics exported was more than \$20,000,000—employing a very large number of hands. K. manufactures also woolen cloth and yarn, cotton goods, machinery, and chemicals. Pop. (1871) 57,128; (1880) 73,872, three-fourths of whom are Rom. Catholics.

KREMENCHUG, *krěm-ěň-chóg'*: district town of Little Russia, govt of Poltava, on the left bank of the Dnieper, 90 m. above Ekaterinoslav. It was founded in the 16th c. by Sigismundus-Augustus, King of Poland, as a barrier against the Tartars. During the reign of Catharine II., it was the chief town of New Russia, and it is now the seat of great industrial and commercial enterprise, containing 34 factories, chiefly for melting tallow and for rope-making. Pop. (1880) 37,579.

KREMENETZ, *krä-měh-něts'*: district town of w. Russia, govt. of Volyn (Volhynia), 130 m. w. of Jitomir, about 20 m. from the frontier of Austrian Galicia. Seven annual fairs are held here, but, owing to the want of river-communication the commerce is limited. Pop. (1880) 11,039.

KREMLIN, n. *krěm'lin* [Russ. *kreml*, a fortress]: extensive fortress in Moscow, the former capital of Russia; including a palace, and several churches and convents: see Moscow.

KREMnitz, *krěm'nits*: town of Hungary, county of Bars, in a deep, gloomy valley, 12 m. w.s.w. of Neusohl. It is noted for its gold and silver mines, less productive now than formerly. Pop. (1880) 8,550, almost entirely of German origin.

KREMS, *krěms*: town of Lower Austria, in a picturesque district on the Danube, at the confluence of the Krems with that river, 38 m. w.n.w. of Vienna. It manufactures mustard and powder, and trades in wine. Pop. (1880) 11,042.

KREMSIER, *krěm'sēr*: one of the prettiest towns of Moravia, on the March, 88 m. n.e. of Olmütz. It is the summer residence of the Abp. of Olmütz, who has here a fine palace, containing a picture-gallery and a library of 30,000 vols. During the revolutionary disturbances at

KREUTZER—KRONENBERG.

Vienna 1849, K. was the seat of the Austrian govt. and imperial councils. Pop. (1880) 11,816.

KREUTZER, or KREUZER, n. *kroyt'sér* [from the cross (*kreuz*) formerly conspicuous upon it]: a small copper coin current till 1876 in s. Germany, the 60th part of the gulden or florin (q.v.). It has had a variable value, but always less than two cents of Federal money.

KREUZNACH, *kroyts'näch*: town in the province of Rhenish Prussia, on the Nahe, a few m. from its junction with the Rhine, 38 m. s.s.e. of Coblenz. It has crooked narrow streets, and old-fashioned houses. It dates from about the 9th c., and is notable for its salt springs, discovered 1478, containing iodine and bromine, and serviceable in many diseases. It is much frequented. The springs range from 45½° to 84° F. Pop. (1880) 15,321.

KRIMMITSCHAU, *krīm'mīt-show*: town of Saxony, about 37 m. s. of Leipzig, on the railway between that place and Hof. It is a busy manufacturing town, the industrial products being woolen yarn, woolen and cotton fabrics, buttons, needles, etc. Pop. (1871) 15,280; (1880) 18,925.

KRIS, n. *krīs*: a Malay dagger, or poniard, the universal weapon of the inhabitants of the Malayan Archipelago. It is of many different forms, short or long, straight or



Kris, or Malay Dagger.

crooked. The hilt and scabbard are often much ornamented. Men of all ranks wear this weapon; and those of high rank, when in full-dress, sometimes carry three or four. In Java, women sometimes wear it.

KRISHNA, n. *krīsh'nā*: in *Hindu myth.*, the eighth Avatāra or incarnation of the Hindu god Vishnu: see VISHNU.

KRISH'NA RIVER: see KISTNAH.

KRISS KRIN'GLE: Dutch name for St. Nicholas: see NICHOLAS, SAINT.

KROLOWEZ, *krō-lō-věts'*: town of Little Russia, govt. of Tchernigov, 100 m. e. of the town of Tchernigov. A famous annual market is held here. Pop. (1880) 13,526.

KRONE, n. *krō'nā* [Dan. a crown]: a coin of Denmark, Norway, and Sweden, value about 26½ cents.

KRONENBERG, *krō'nēn-bērĥ*: town of Rhenish Prussia, three m. s.e. from Elberfeld, in the industrial activity and prosperity of which it has partaken. Manufactures of linen and cotton are carried on, also of articles of iron and steel. Pop. (1880) 8,214.

KRONIA—KRÜDENER.

KRONIA, n. *krōn'ī-a* [Gr.]: Greek festival in honor of Kronos or Saturn, and corresponding to the Roman Saturnalia (q.v.).

KRON'STADT: seaport in Russia: see **CRONSTADT**.

KRON'STADT: town in Transylvania: see **CRONSTADT**.

KROOMEN, n. plu. *krō'mèn*: laborers employed in boats and vessels at Sierra Leone—originally from the *Kroo* or *Kru* country. They are of a pagan negro race, supposed to have originated in central Africa. Their country is now on the St. Paul river, and is about 70 m. long from Cape Mesurado to St. Andreas. They are very black and wooly-headed, stout, active, and fond of the sea and boats. They are great polygamists, and Christian missionary efforts among them have had no success.

KROSSEN, *krōs'sèn*: walled town of Prussia, on the left bank of the Oder, 32 m. s.e. of Frankfurt. There are manufactures of woolen, linen, leather, and earthenware. Pop. (1880) 6,746.

KROZET' ISLANDS: see **CROZET ISLANDS**.

KRÜDENER, *krü'déh-nér*, **BARBARA JULIANA VON WIETINGHOFF**: religious visionary and enthusiast: 1766, Nov. 21—1824, Dec. 25; b. Riga; dau. of Baron von Wietinghoff. When she was but 14 years old she married the Baron von K., Livonian nobleman, Russian ambassador at Venice. Her married life was unhappy, and after the birth of a son and daughter, she was divorced from her husband. The succeeding incidents of her stormy career are supposed to form the groundwork of the novel *Valerie*, which she published 1803. After many adventures, she came to Berlin, where she was admitted to the close intimacy of the queen, Louisa, of all whose projects the baroness was the confidante and sharer. The shock occasioned by the death of this princess is said to have disturbed the balance of M. von K.'s mind; and from that date she became a zealous disciple of the celebrated pietist, Jung Stilling, and ultimately gave herself up to religious mysticism in its most exaggerated form. From Berlin she moved to Paris, where she appeared as a prophetess, and the herald of a new religious era; and she attracted such notice by the fulfilment of certain of her predictions of public events, as of the fall of Napoleon, his return from Elba, and the final crisis of Waterloo, as to obtain access to Emperor Alexander, and eventually to acquire much influence over him. Her gigantic schemes for the elevation of the social and moral condition of the world, caused her to appear a dangerous character in the eyes of persons in authority, and she was compelled to withdraw from France and other countries in succession. In consequence, she retired to one of her paternal estates near Riga, where she entered into relations with the Herrnhüter or Moravian Brethren; but her restless disposition soon carried her into fresh enterprises, the latest of which was the formation of a great correctional establishment in the Crimea for the reformation of criminals and persons of evil life. In the

KRUMAU—KRUMMHORN.

midst of her efforts for this object, she died at Kara-su-bazar. Besides the novel already named, her only other work was a pamphlet entitled *Le Camp des Vertus* (Paris 1815); but many curious details of her conversation and opinions are preserved in Krug's *Conversations with Madame von K.* (Leipzig 1818).

KRUMAU, *kró'mow*: small town of Bohemia, on the Moldau, 14 m. s.s.w. of Budweis. Its castle, a fine structure on a rock, contains five separate courts, and is surmounted by numerous towers and pinnacles. There are some manufactures. Pop. (1880) 7,659.

KRUMMACHER, *króm'mách-ér*, FRIEDRICH ADOLF: minister of the Reformed Church in Germany: 1767, July 13—1845, Apr. 4; b. Tecklenburg, Westphalia; father of Friedrich Wilhelm K. He studied theology at Halle, then was a teacher and professor till about 1807, when he became successively preacher at Crefeld and at Kettwich, consistorialrath and supt. in Bernburg, and pastor of the Ansgariuskirche, Bremen, 1824. He died in Bremen. In 1805 he wrote *Parabeln* (Parables), 9th ed. Essen, 1876, a work which has had permanent popularity in Germany, and of which there have been repeated editions in English.

KRUMMACHER, *krúm'mách-ér*, FRIEDRICH WILHELM: German Reformed clergyman and author: 1796, Jan. 28—1868, Dec. 10; b. Mörs; son of Friedrich Adolph K. He was distinguished as a zealous advocate of the Reformation theology and as an opponent of the Rationalists. Some of his works, particularly his discourses on the history of *Elijah the Tishbite*, and on the life of Elisha, also *The Suffering Savior*, and *David, the King of Israel*, had great popularity in Germany, and by means of translations in Britain and America. He was indeed almost the only German preacher known in England and the United States. He was pastor at Frankfort, Ruhrort, Barmen, and Elberfeld; was appointed by King Frederic William IV. to Trinity Church, Berlin, 1847; and 1853 was appointed court chaplain at Potsdam, where his relation with the king became one of great intimacy. He was a great promoter of the Evangelical Alliance. In 1843, he was called to the Mercersburg Ger. Ref. Theol. Sem. (Penn.), but declined. K. was a notably eloquent preacher.—His uncle GOTTFRIED DANIEL K. (1774, Apr. 1—1837; Jan. 30), pastor at Bärl, Wulfrath, and Elberfeld, was a man of almost eccentric zeal and a leader of the pietists.

KRUMMHORN, *krúm'haworn* (Ital. *cormorne*): very ancient wind-instrument made of wood, the under part of which is bent outward in a circular arc.—K. is also the name of an organ-stop, in almost all German organs, and generally of 8 ft. pitch. The pipes are of tin, the body or sounding part being cylindrical, and partly shut at the upper end. The Italian name of *cormorne* has been corrupted by English organ-builders into *cremona*, which is the same stop in English organs. The sound of the K. as an organ-stop is soft and quiet; but it does not keep in tune so well as other reed-stops.

KRUPP'S STEEL.

KRUPP'S STEEL, *krúps*: steel produced in the great works of Herr Krupp, at Essen, Prussia. His manufactory, always large, has been gradually increasing in size during the last half century, until it now covers nearly 1,000 acres, and gives employment to 16,000 to 20,000 persons. For large metallurgical works, Essen is favorably situated, being in the centre of a coal-bearing area, where coal of the purest kind can be procured. There are also at hand the manganiferous iron ores of Prussia, excellently adapted for the manufacture of steel; but it is believed that the admirable organization of every part of Krupp's manufactory has conduced, as much as anything, to his splendid success. With laborers and mechanics who have passed the regulation-time in the Prussian army, overseers trained in the German technical schools, and a staff of experienced analytical chemists, he has obviously a great advantage in conducting operations where order, system, and skill are of paramount importance. But even with these benefits, Krupp's productions would not have gained their celebrity, were it not for the scrupulous care with which he performs every manipulation.

For the manufacture of steel by the *Cementation* and *Bessemer* processes, see IRON: but there are several other methods of making it; and one, the decarburization of cast-iron in the puddling furnace, is the process by which Krupp makes his steel, in the first instance; and the material that he most largely employs is *Spiegeleisen*, or specular cast-iron, a highly crystalline variety, usually containing about 4 per cent. of manganese. This iron is admirably suited for conversion into steel. The puddling process for steel is similar to that employed for iron (q. v.), except that the former is conducted at lower temperature, and requires nicer management; but in the case of steel, the cast-iron to be operated upon is never previously refined. Cast-iron to the extent of about 4 cwts. is melted in the puddling furnace, mixed with a quantity of slag or cinder (chiefly silicate of iron), and stirred with a rabble. During this operation, the carbon in the cast-iron (usually about 5 per cent.) is gradually oxidized by the oxygen present in the cinder; carbonic oxide is produced, and as it escapes, what is technically termed 'boiling' takes place. When the ebullition becomes active, the temperature is raised until the appearance of incipient solidification occurs; the heat is then lowered, and the ordinary process of balling proceeded with. Steel thus produced usually contains from 0.5 to 1 per cent. of carbon; but if the temperature is not skilfully regulated, the carbon becomes wholly burned away, and malleable iron instead of steel is produced.

Puddled steel, although useful for most purposes in the arts (except cutlery), nevertheless lacks homogeneity, on account of a certain intermixture of cinder, the riddance of which is difficult without fusion—a defect which is apt to prevent it from welding perfectly. In Krupp's works, the puddled steel is remelted into crucibles, in order to convert it into cast-steel; and it is the wonderful uniformity of quality with which he manufactures this in very large masses,

KRUPP'S STEEL.

that constitutes the superiority of, and gives so great an interest to, his productions. The crucibles employed are made with extreme care, mainly from fire-clay, to which a little plumbago is added; their capacity varies from 50 to 100 lbs., and it is reported that as many as 100,000 are kept drying at the same time. After being once used, the crucibles are broken up, and mixed with other material, to make new ones.

In the casting-house where the large ingots are run, the furnaces, which contain about 1,200 crucibles, are arranged along the sides of the building; and in the central portion, the steel molds, varying in capacity from 100 lbs. to 50 tons, are disposed in line between two pair of rails, upon which runs a movable crane. It is in the casting of such an enormous ingot as 50 tons of steel (the largest yet produced) from crucibles of small capacity, that the perfect organization of the establishment becomes most strikingly apparent. At a given signal, one gang of workmen remove the crucibles from the furnaces, while another seize them with tongs for the purpose, and pour their contents into narrow canals of wrought-iron, lined with fire-clay, which converge into the opening by which the mold is filled. This is the critical stage of the operation, the difficulty being to deposit in the mold a continuous stream of melted steel of about the same degree of heat, so as to cool uniformly, and to solidify into a perfectly homogeneous mass. Of such uniform soundness are some of Krupp's large steel ingots that one—(shown in the London Exhibition of 1862) 9 ft. high, 44 inches in diameter, and weighing 21 tons—when broken across, did not show the slightest flaw, even when examined with a lens.

In order to manipulate these extraordinary masses of steel, there is a steam hammer, weighing 50 tons—the mechanical marvel of the works at Essen—which has a cylinder nearly 6 ft. in diameter. It has a 50-ton crane at each of its four corners, and behind each of these again, there are four heating furnaces. A movable bench on low massive wheels serves to remove a large ingot from any of the furnaces, which is then, by means of the powerful cranes, and a system of pulleys and crabs, placed on the anvil, and worked into any desired shape. The anvil-face weighs 185 tons.

The steel manufactured by Krupp consists chiefly of rails, tires, crank-axles, shafts, mining pump-rods, and guns—the proportion of ordnance being about two-fifths of the whole. Guns have been made at Essen for a dozen nationalities. The produce of the works amounted, 1882, to 300,000 tons of steel, and 26,000 tons of iron; 20 years before, it was only 125,000 tons of steel. In 1882, the works included 1,556 furnaces, 429 boilers, 453 steam engines of 18,500 horse-power, and 82 steam-hammers. In 1874, there were 1,100 furnaces, 275 coke-ovens, 264 forges, 300 steam boilers, 71 steam-hammers, 286 steam-engines of 10,000 horse-power, 1,056 machine tools, 30 miles of railway, 80 telegraph stations, a chemical laboratory, and photographic, lithographic, printing, and bookbinding es-

KRUSENSTERN—KRYLOV.

tablissements. There is a fire-brigade of 70 men, besides 166 watchmen. In 1876 the consumption of coal and coke together amounted to 612,000 tons; that of gas, 7,300,000 cubic metres in 20,342 burners. Krupp has built good houses, hospitals, etc., for his men. Beside the works at Essen, the firm possesses several mines and smelting-works. In the Paris Exhibition of 1867, Krupp showed a huge gun intended for a coast battery for defence against plated ships. It was made entirely of cast-steel, weighs 50 tons, and could propel a shot weighing 1,080 lbs. It took 16 months, working day and night without interruption, to manufacture. The price of the gun alone was \$75,000, and of its carriage and turn-table, which weighed respectively 15 and 25 tons, nearly \$30,000 more. In the Vienna Exhibition of 1873, Krupp showed, in a pavilion by themselves, a number of most interesting objects in steel. Among them were a huge gun like that shown at Paris, about 4 ft. 6 inches in greatest diameter; an octagonal ingot, weighing fully 50 tons; a marine-engine shaft, 15 inches in diameter. He exhibited also at Philadelphia 1876.

KRUSENSTERN, *kró'zen-stěrn*, ADAM JOHN, Chevalier VON: 1770, Nov. 8—1846, Aug. 24; b. at Haggud in Esthonia: distinguished Russian voyager. He served for some time in the British navy. Emperor Alexander, when he ascended the Russian throne, took up a plan proposed by K. for the promotion of the American fur-trade, and consequently intrusted him with the command of an expedition both for scientific and for mercantile objects. K. sailed from Cronstadt with two ships, 1803, Aug. 7, and returned 1806, Aug. 19; and was the first to conduct a Russian expedition round the world. He failed in one of the objects for which he was sent out—the reopening of Russian trade with Japan, but made interesting geographical discoveries; and his careful explorations of coasts made his voyage very important for geographical science. He published an account of this voyage (3 vols.; Petersb. 1810–12, with a vol. of maps and plates), which was soon translated into all the principal languages of Europe. The contributions to natural history resulting from the expedition were the subject of a separate work by Tilesius (Petersb. and Leip. 1813); and K. himself subsequently published *Contributions to the Hydrography of the Pacific Ocean* (1819) and several other works on the same subject.

KRYLOV, *kre-lov'* (or KRILOFF, *kre-lof'*, or KRUILOFF, *krwe-lof'*), IVAN ANDREJEVITCH: celebrated Russian fabulist: 1768, Feb. 14—1844, Nov. 21; b. Moscow; son of a poor officer in the army. He received the elements of education at Tver from his mother, and learned French from a French tutor resident in the house of the governor of Tver. K. read indiscriminately all books which fell into his hands. Dramatical works made the greatest impression on him, and in his 15th year he wrote an opera *Ka-feinítza* (The Coffee Fortune-teller), which was never represented, but attracted notice in Tver, and procured patrons for him, who got him an appointment, 1785, in a public

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office in St. Petersburg. A bookseller gave him 60 roubles for the manuscript of his opera, which he spent in buying the works of Racine, Molière, and Boileau. In 1786, he wrote another tragedy, *Philomela*, which, though never represented, was printed in the collection *The Russian Theatre*. After the death of his mother, 1788, K. received a post in the imperial cabinet, which he resigned two years afterward for literary work. For two or three years, beginning 1789, he occupied himself partly with journalism, but soon gave it up, and produced a succession of prose comedies, among which were *The Crazy Family* (1793), *The Mocking-bird*, and *The Poet in the Anteroom* (1794), which brought him under Empress Catharine's notice. In 1801, he was appointed sec. to Galitzin, gov. of Riga, who invited him to his country house at Saratov, where he spent a few years in entire leisure. He returned to St. Petersburg 1806, where he brought several very successful plays on the stage, *The Milliner's Shop*, *The Lesson to Ladies*, etc. It was at this time, when about 40 years of age, that he turned his attention to that kind of writing which was to immortalize him. K. having translated some of La Fontaine's fables, the poet Dmitriev was so struck with their felicity, that he encouraged him to persevere in that line. In 1808, the first collection of his Fables (23 in number) appeared, which met great success. Others followed 1811 and 16. In 1811, he was made member of the Petersburg Acad.; in 1812, an official in the Imperial Library; in 1830, councilor of state; and in course of time he was so overwhelmed with honors and pensions, that 1841, when he resigned his public office, he drew from the state and the imperial treasury 11,700 roubles. On the occasion of his 70th birthday, homage flowed in on him from all quarters. Soon after his death a national subscription, to which children eagerly contributed their share, was started to raise a monument to his memory; and toward the end of the reign of Emperor Nicholas, his statue in bronze, by Kloth, was placed in the Summer Garden at St. Petersburg. Many stories are current of K.'s eccentricities. The genuine national spirit, the joyousness, simplicity, wit, and good humor that pervade his Fables make them the most popular of Russian books, and many single sentences of them have become proverbs. They are generally the first reading-book put in the hands of children, and thus many thousand copies, both in costly and cheap editions, are in circulation among all classes. He produced in all nearly 200 fables, of which more than three-fourths are original, and the rest are imitations. Translations have been made by Ralston (English 1871), Einerling (French 1845), Torney and Löwe (German 1842 and 74), etc. There are numerous Italian and French imitations.

KSHATRIYA, *kshät'rē-ya* or *kshā-trē'a*: the second or military caste in the Brahmanical social system: see CASTE.

KUBAN—KUEN LUN.

KUBAN, *kó-bán'*: district and govt. in Russia, at the n.w. extremity of the Caucasus, at the foot of the Caucasus range of mountains; 27,728 sq. m. The gov., residing at Ekaterinodar (chief town, pop. 30,000), is chief of the Kuban Cossacks, and has both military and civil power. The climate is various but healthful, and the soil very fertile. The river K. is navigable for flat boats. Pop. 862,473; of which Cossacks 510,038, Russian settlers 108,346, natives (largely Mohammedans) 95,602.

KÜBLAI KHAN, *kü-bli-kán* (called by the Chinese CHITSOÜ), properly KHÜBILAI KHAN, the Khagan, or Grand Khan of the Mongols, and Emperor of China: 1216-94 (reigned 1259-94): grandson of Genghis Khan through his fourth son, Tuly Khan. Being ordered by his brother Mangû, then Khagan of the Mongols, to subjugate the Corea and China, K. entered on the work; and after his accession to the throne at his brother's death, he availed himself of an application, made by Si-Tsung of the Sung dynasty to aid him in expelling the Mantchûs, and entered China (1260) with an immense army, drove out these Tartars (or *Kin* dynasty), and completely confirmed his sway over n. China. K., who was an able and energetic prince, adopted the Chinese mode of civilization, and endeared himself to his subjects by his attention to men of letters, and the honors which he bestowed on the memory of their former renowned monarchs. In 1276 the great capital of the Sung dynasty surrendered, and into that city—probably then the grandest in the world—K.'s army entered as conquerors. In 1279 he completed the ruin of the Sung dynasty by subduing its last remaining force in southern China, and founding a new dynasty—that of the Yuen (the first foreign race of kings that ever ruled in China). From 1259, K. had been the Khagan of the Mongols, so that his dominions now extended from the Frozen Ocean to the Strait of Malacca, and from the Corea to Asia Minor—an extent of territory the like of which had never before, and has never since, been governed by any one monarch. Marco Polo visited his court. Irritated by the failure of an expedition against Japan, he indemnified himself by the conquest of Mantchuria and other districts; but soon afterward died at Pekin. The grand-dukes of Russia were among his tributaries.

KUEN LUN, *kwên lón'* (or KUN LUN, or KURKUN, or KOOLKOON) MOUNTAINS: great mountain-chain of central Asia, running generally e. and w. to the n. of Tibet, which it separates from Yarkand and Khoten. The K. L. Mountains have been little explored; but some of the passes crossed are 18,000 ft. high, and several of the peaks are not less than 28,000. The main chain begins at about 76° e. long., and is supposed to cease at about 95° e. At about 92° e. long. it divides into two ranges. Toward the Indus it sends forth many branches down whose valleys the glaciers descend 10,000 ft. Some of these glaciers are among the most stupendous in the world.

KUFIC COINS—KUFIC WRITING.

KUFIC COINS, *kū'fik* (or **CUFIC**): the earliest Moham-
medan coins, inscribed with the Kufic or ancient Arabic
character (see **KUFIC WRITING**). According to Makrizi,
the first were struck in the 18th year of the Hedjrah (A.D.
638), under Caliph Omar, who, wishing to make Islam en-
tirely independent of foreign, chiefly Byzantine and Per-
sian, influence, even in the province of money, caused
'Mohammedan' coins to be struck, in the shape of those
Persian and Byzantine ones which had been circulating
among his subjects till then, and he caused them to be in-
scribed with Koranic passages. According to other Arabic
writers, however (Al-Makin, Soyuti, Ibn Koteiba, etc.),
the earliest Kufic money dates from the time of Caliph Abd
Al-Malek (76 H. = A.D. 695), a period much more proba-
ble, considering that no K. C. have been discovered an-
terior to 77 H. They were first of gold and silver, the
former being *dinars* (corrupted from denarius—a name,
moreover, wrongly applied), of the value of about \$2.56;
the latter, *dirhems* (drachma), worth almost 11 cents. Not
before 116 H. were copper coins, *fels* (follis? obolus?), in-
troduced, and the material for them was taken by the
order of Caliph Walid from a colossal bronze statue of an
idol. Figures, human or otherwise, are rarely found on
these coins. The legend generally runs either around the
margin, or is inclosed by a ring. The oldest dinar—of 77
H.—is preserved in the Milan Museum (formerly Cav.
Millingen's collection). Next comes the Stockholm Acad.
with a dinar of 79 H. The oldest dirhem found as yet,
dated 82 H., is likewise in Milan, in the Museo di Stefano
di Mainoni. One of the richest collections of Kufic coins
is in the Stockholm Acad.: owing chiefly to the great
numbers found on the shores of the Baltic, brought
thither probably by Mohammedan traders in the middle
ages. Not before the 7th c. H. were the Kufic characters
superseded by the modern Neshki upon coins; while for
books, etc., they had long fallen into disuse. The best
authorities on this subject are Makrizi, Adler, the Tych-
sens, Reiske, De Sacy, Castilioni, Cataneo, Frähn, Lind-
berg, Pietraszewski.

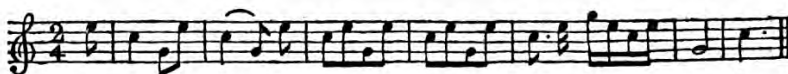
KU'FIC WRITING: ancient form of Arabic characters,
which came into use shortly before Mohammed, and was
chiefly current among the inhabitants of n. Arabia, while
those of the s.w. parts employed the Himjaritic or Mosnad
(clipped) character. The Kufic is taken from the old
Syriac character (Estrangelo), and is said to have been in-
troduced by Moramer or Morar ben Morra of Anbar. The
first copies of the Koran were written in it, and Kufa, a
city in Irak-Arabi (Pashalic of Bagdad), being the one
which contained the most expert and numerous copyists,
the writing itself was called after it. The alphabet was
arranged like the Hebrew and Syriac (whence its designa-
tion, *ABGaD HeVeS*), and this order, though now super-
seded by another, is still used for numerical purposes.
The Kufic character, of a somewhat clumsy and ungainly
shape, began to fall into disuse after about A.D. 1000; Ebn
Morla of Bagdad (d. 938) having invented the current or

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so-called Neshki [*nashak*, to copy] character, which was still further improved by Ebn Bawwab (d. 1031), and which now—deservedly, as one of the prettiest and easiest—is fully in vogue in east and west. It is only in mss. of the Koran, and in title-pages, that the Kufic is still employed. A peculiar kind of the Kufic is the so-called Karmatian—of somewhat more slender shape—in which several inscriptions have been found in Arabia, and in Dauphiny, Sicily, etc., and which is seen also on a coronation-mantle preserved in Nuremberg. The Kufic is written with a style, while for the Neshki, slit reeds are employed. Different kinds of the latter character (in which the alphabet is arranged according to the outward similarity of the letters) are the Moresque or Maghreb (Western), the Diváni (Royal—only employed for decrees, etc.), the Tâlik (used chiefly in Persian), the Thsoletki (threefold or very large character), Jakuthi, Riháni, etc.

KUGLER, *kô'glér*, FRANZ THEODOR: 1808, Jan. 19—1858, Mar. 16; b. Stettin: German historian of art. He studied at the Univ. of Berlin, and then pursued the study of the fine arts. In 1833 he became a prof. in Berlin, where he died. His most valuable works are a *Handbuch der Geschichte der Malerei*, etc. (Manual of the History of Painting from the Time of Constantine the Great to the Present Day, 1837), which has been translated into English—the part relating to Italian art by Sir Charles and Lady Eastlake, and that relating to the German, Spanish, French, Dutch, and Flemish schools, under the editorship of Sir Edmund Head; and a *Handbuch der Kunstgeschichte* (Manual of the History of Art, etc., 1842). He is also favorably known as a poet, and author of several dramas.

KUH-HORN, *kô'hawörn*, called sometimes ALPHORN: wind-instrument much used by the herdsmen in the mountainous countries of Germany. It consists of a tube about three ft. long, and a little bent, and gradually widening out into a kind of bell, like a bassoon. It is of wood, or of the bark of the willow wrought together and bound by a pitched cord. The sound is produced by a mouth-piece like that of a trombone. It has generally only five notes, but extending over nearly two octaves—viz., C, G, C, E, G. With these five notes, the herdsmen often play interesting melodies, which, among the mountains, have an indescribable charm. The following is a specimen:



KÜHNÖL, *kü'nöl* (or KUINOEL), CHRISTIAN GOTTLIEB: 1768, Jan. 2—1841, Oct. 23; b. Leipzig: learned commentator of rationalistic type though supernaturalistic in tendency; prof. of philosophy at Giessen 1790–99, and from 1799 prof. of theology. His Old Test. commentaries, dry in style but full of learned criticism, formerly had high repute even in the United States; and *Commentarius in*

KUILENBURG—KU-KLUX KLAN.

libros Nova Testamenti historicus (Leipzig 1807-18, 4 vols., reprinted London 1835, 3 vols.) is still of value.

KUILENBURG: see CULENBORG.

KUKAWA, or KUKA, *kó ká*: important town of central Africa, cap. of Bornu, in a level district on the w. shore of Lake Tsad, lat. 12° 55' n., long. 13° 26' w. A great fair or market is held here weekly. 12,000 to 15,000 people are often crowded together in the market-place. Pop. abt. 60,000.

KU'KLUX KLAN, *kū'klüks klän*, or KUKLUX: secret political organization formed in the s. states during the reconstruction period after the war of secession, for the purpose of preventing freedmen from voting or holding office, and of obstructing the operation of the reconstruction acts of congress. The order was known by different names in different sections, as 'The Invisible Empire,' 'The White League,' 'The Knights of the White Camellia,' etc., and the first election for officers under what might be called its constitution was held 1867, May. Local or subordinate bodies were called 'dens,' their chief officers 'cyclops,' and members 'ghouls.' A 'province' comprised the 'dens' in a county, and was under the orders of a 'grand giant' and four 'goblins'; a 'dominion' was a congressional district, under a 'grand titan' and six 'furies'; a 'realm' was a state, with a 'grand dragon' and eight 'hydras'; and the 'empire' was the whole field of operation and was under the authority of a 'grand wizard' and ten 'genii.' Whether the members had a special regalia for their secret meetings is not known; but abundant evidence established the fact that when on 'duty' the head and shoulders were covered with a hood with holes for the eyes and mouth and bearing fantastic or horrifying figures. As first organized the assoc. sought to achieve its purpose by intimidating the former slaves, and as these after a time began to show fight in the daytime, the 'ghouls' gradually changed the time of their persecution to night, with the result that few negroes would dare venture from their cabins after dark. From mere intimidation the members advanced to brutality and murder; and from persecuting the freedmen they proceeded to punish the 'carpet-baggers' or people from the n. states, and the 'scalawags' or people of the s. who favored the scheme of reconstruction. The 'ghouls' were bound together by the following initiatory oath or obligation, the provisions of which were shown to have been rigidly enforced by evidence taken before the congressional investigating committee: 'I (name), before the great immaculate Judge of heaven and earth, and upon the holy evangelists of Almighty God, do, of my own free will and accord, subscribe to the following sacred, binding obligation: I. I am on the side of justice and humanity and constitutional liberty, as bequeathed to us by our forefathers. II. I reject and oppose the principles of the radical party. III. I pledge aid to a brother of the Ku-Klux-Klan in sickness, distress, or pecuniary embarrassment. Females, friends, widows, and their house-

KULA—KUMAON.

holds shall be the special object of my care and protection. IV. Should I ever divulge, or cause to be divulged, any of the secrets of this order, or any of the foregoing obligations, I must meet with the fearful punishment of death and traitors' doom, which is death, death, death, at the hands of the brethren.' In 1871, Mar., a joint committee of the two houses of congress was appointed to investigate the outrages attributed to the organization, and the first result was the 'force bill' of 1871, Apr. 20, which made K. K. K. offenders punishable in the federal courts, and authorized the pres to suspend the habeas corpus act in the disturbed regions when necessary, and to employ troops to preserve order. These measures soon caused the overthrow of the order.

KULA, *kō lōh*: town of Austria, in the Servian Woiwodschafft, on the Franzens or Bacs canal, 26 m. n.w. of Neusatz. Pop. (1880) 8,102.

KULDJA, *kōl'ja*, also called ILI: an important town, capital of a large territory in Dzungaria, central Asia, near the frontiers of Russia and China. It stands on the right bank of the Ili, a considerable river, which, rising in the Tian-Shan Mountains, flows westward into Lake Balkash, after a course of about 300 miles. The town, which till lately had a very brisk and growing trade (the imports in 1873 being valued at upwards of \$150,000) has still a population of near 50,000, composed of Dzungarians, Bokharans, Tajiks, and Chinese. The region in which K. stands revolted against China in 1865, and was occupied and taken possession of by Russia in 1871. Pursuant to a promise then made by the Czar, a treaty was agreed on 1879, by which Russia (1881) restored four-fifths of the province of K., including the town of Kuldja, to the Chinese, who agreed to pay an indemnity. The remainder, retained by Russia, gives that power a foothold, and an influence in the country.

KULM, *kūlm*, or CULM: small village of Bohemia, 16 m. n.n.w. of Leitmeritz; scene of two bloody conflicts between the French and allies, 1813, Aug. 29, 30. The French, numbering 30,000 men, were commanded by Gen. Vandamme; the Russians, during the first day's conflict, were 17,000; and were commanded by Gen. Ostermann-Tolstoi. During the night, the latter were heavily reinforced, and on the second day Barclay de Tolly assumed the command with 60,000 troops. The result was the complete wreck of the French army, which lost in these two days almost 20,000 men, while the allies did not lose half of that number.

KUMAON, *kūm-ā-ōn'*: district of British India, in the Kumaon division of the N.W. Provinces; lat. 29°—31° n., long. 78°—81° e. It lies chiefly on the s. slope of the Himalaya, comprising more than 30 summits in that range, which vary in altitude from about 18,000 ft. to nearly 26,000. With the exception of a belt on its s. frontier, 2 to 15 m. broad, the whole country is one mass of mountains and forests. It contains mines of gold, copper, and

KUMÂRASAMBHAVA--KÛNEN.

lead, which have never yet been profitably worked. Throughout the s. belt above mentioned, it produces, generally in two crops a year, wheat, barley, oats, millet, pease, beans, etc., with rice, cotton, indigo, sugar, ginger, turmeric, etc. Lately K. has become the rival in India of Assam for the cultivation of the tea-plant. The climate is unhealthful. Area of K. (*Kumârun*) district, 6,000 sq. m.; pop. (1881) 493,641. It is sometimes named Almora, after its chief town.—The *division* of K. (in the Oudh section of N.W. Provinces) has 12,438 sq. m; pop. 1,046,263.

KUMÂRASAMBHAVA: very famous Hindu poem said to be by Kâlidâsa (q.v.), on the birth of Kumâra or Kârṭtikeya (q.v.), the Hindu god of war.

KUMBECEPHALIC, a. *kûm-bě-sě-făl'ik* [Gr. *kumbē*, a boat; *kephalē*, the head]: in *anthropology*, boat-shaped; term proposed by Dr. D. Wilson to denote the peculiar conformation of skulls found in chambered barrows.

KUMBUK, *kûm-bûk'* (*Pentaptera tomentosa*): tree of nat. ord. *Combretaceæ*, native of the E. Indies. It is a noble tree, and produces durable timber. Sir James E. Tennant describes a K. tree in Ceylon, 45 ft. in circumference close to the ground, and 21 ft. at 12 ft. above the ground, which serves as a landwark for boatmen towering high above forests of cocoa-palm, and discernible at a distance of 20 m. The bark of the K. yields a black dye, and contains so much lime, that its ashes are used as lime for chewing with betel.

KUMISS, or **KOUMISS**, n. *kô'mis* [Russ. *kumys* or *koomuis*]: intoxicating beverage much esteemed by the Kalmucks; made from the soured and fermented milk of mares. It has an acidulous taste. A spirit is obtained from it by distillation. The tribes which use K. are free from pulmonary phthisis, and the observation of this fact has led in w. Europe and America to the beneficial use of an artificial K. made of ass's and cow's milk in cases of consumption. Of late, extensive establishments have been established in s.e. Russia for treating invalids with genuine K.; one at Samara is visited by 1,500 patients in a season. See Carrick's *Koumiss* (1881).

KÛM'MEL: see LIQUEUR.

KUMQUAT, *kûm-kwât* (*Citrus Japonica*): small species of orange, native of China and Japan, and much cultivated in these countries. It has been introduced into Australia. It endures more frost than any other of the genus, and will probably prove a valuable acquisition to many parts of Europe and America. The plant is a shrub sometimes six ft. high, but in cultivation it is not allowed to exceed the height of a gooseberry-bush. The fruit is oval, and about the size of a large gooseberry; the rind is sweet, and the juice acid. It is very delicious and refreshing. The Chinese make an excellent sweetmeat by preserving it in sugar.

KÛNEN, *kû'nén* (or **KUENEN**), ABRAHAM, D.D., LL.D.: theologian: b. Haarlem, Holland, 1828, Sep. 9. He was

KUNERSDORF—KUNIGUNDE.

educated in the local gymnasium; graduated in theology at the Univ. of Leyden 1821; became prof. extraordinary of theology there 1822 and prof. ordinary 1855; was elected a fellow of the Amsterdam Royal Acad. of Sciences 1865; and was pres. of the 6th congress of Orientalists at Leyden 1883. Since 1862 he has been distinguished as an Orientalist, and a critic of the Biblical books, especially of the Pentateuch, advancing the theory of a later origin than has usually been believed. See GENESIS: HIGHER CRITICISM. Among his numerous works, nearly all of which have been translated into several languages, the most noteworthy are: *Historico-Critical Investigation into the Origin and Collection of the Old Testament Books*, 3 vols. (1861-65); *The Religion of Israel to the Fall of the Jewish State* (1874-5); and *The Prophets and Prophecy in Israel* (1877). In 1882 he lectured at Oxford and London on *National Religions and Universal Religions*. He received the degree LL.D. from the Univ. of Leyden 1853.

KUNERSDORF, *kū'ners-dawrf*: village of Brandenburg, in Prussia, nearly 4½ m. n.e. of Frankfurt-on-the-Oder; scene of one of the most remarkable battles of the Seven Years' War, 1759, Aug. 12, in which Frederick the Great was completely defeated by a combined attack of Russians under Soltikof, and Austrians under Laudon. The loss on the Prussian side was 26,000 men, with almost all their artillery and baggage, while their opponents lost 24,000 men.

KUNG, *kōng*, or KUNG CHIEN-WANG (Prince of Yih-Sin): statesman: b. China, 1833, Jan. 1; brother of the emperor Hien-Fung (d. 1861), uncle of the emperor Tung-Che (d. 1875). On the accession of his uncle, he was appointed one of three regents of the empire, and became the actual head of the govt., the emperor confirming all his official acts. As the acknowledged leader of the progressive party in China, he has promoted intercourse with foreign nations, repressed native violence against Christians through the empire, sent several special embassies abroad to study the civil, political, and educational features of other countries, and negotiated the treaty with Japan after the Formosa troubles. He retained his great influence under the emperor Kwang-Seu, and was the founder of the foreign office and the chief sec. of state.

KUNG CHOW-FOO: see HAINAN.

KUNGUR, *kōng'gôr*: town in the gov. of Perm, Russia, 1,416 m. from St. Petersburg; renowned for its tanneries, in which the best quality of Russia leather is produced. In the neighborhood are several large iron works. Pop. (1880) 10,804.

KUNIGUNDE, *kô-nē-gûn'deh*, SAINT: d. 1040, Mar. 3; wife of Emperor Henry II., and daughter of Count Siegfried of Luxemburg. Her husband, Duke Henry of Bavaria, was crowned king of the Germans 1002, and emperor 1014. Her reputation having been unjustly assailed, she vindicated herself by walking barefooted over hot ploughshares. After the death of her husband 1024, she

KUNKUR—KUPFERSCHIEFER.

retired into the convent of Kaufungen, near Cassel, which she had founded, and spent the remainder of her days in pious works. Pope Innocent III. gave her a place among the saints in 1200.

KUNKUR, n. *kôn'kér*: a Hindoostanee term for a superficial accumulation spread over a very large proportion of India and the adjoining countries, and which seems in point of time to correspond with the drift or boulder clay of Europe; also called **KUNKUR-CLAY**.

KUNNOJ, *kûn-nôj'*, or **KUNNOUJ**: decayed town of British India, cap. of the pergunnah of K. in the dist. of Furruckabad, 65 m. n.w. of Lucknow, on the Kali Nuddi river, about three m. from its junction with the Ganges. At present, the place is little more than an expanse of ruins, mountains of which meet the eye in every direction, on a space of ground much larger, it is said, than the site of London. The greatest part of the standing buildings are uninhabited, and tottering to decay. The few poor people now in the place live in mud huts built up against the old walls. The present town is about a mile long, and half a mile broad, with a ruinous fort of no great antiquity. The most remarkable buildings are two handsome Mohammedan mausoleums. K. was formerly one of the greatest of Indian cities; and according to some, ranks second in antiquity. One authority considers the town to have existed before the first introduction of Brahmanism from the West. Until about the 12th c. it continued the chief city of India; but 1194, it was attacked by Shahabuddin Mohammed, sovereign of Ghoor, who defeated the king of K., and overthrew that monarchy. After this, the history of the place consists only of a succession of disasters. Pop. (1871) 17,577, living in great indigence.

KUNZE, *kûnt'séh*, **JOHN CHRISTOPHER**, D.D.: 1744, Aug. 4—1807, July 24; b. Artern, Prussian Saxony: eminent among Lutheran theologians in the United States. After studying theology at Leipzig, he was a teacher in Germany; and was collegiate pastor of the Lutheran St. Michael's and Zion's churches, Philadelphia, 1770–79, and rector (succeeding H. M. Mühlenberg, D.D., whose daughter he married) 1779–84. He influenced the College, now Univ., of Pennsylvania in the direction of an interest in the German language and German students. He was pastor of the Lutheran church in New York from 1784 till his death, aided in founding the New York Univ., and was one of its regents and the prof. of Oriental languages and literature. In doctrine he was of the Pietistic school, and was eminently faithful and useful in all Christian work.

KUPFER-NICKEL, n. *kûp'fêr-nîk'l* [Ger. *copper nickel*]: a term applied by the German miners to a native alloy of nickel and arsenic; the arsenide of nickel. **KUPFER-SCHIEFER**, n. *-shê'fêr* [Ger. *copper slate*]: a dark, bituminous-looking, slaty marlstone, richly impregnated with copper pyrites.

KUPFERSCHIEFER, *kûp'fêr-shêf-êr*: one of the series of strata which make up the Permian rocks. It consists of

KUPPERWUNJ—KURDISTAN.

beds of dark shale with copper ore (hence the name), and containing beautifully preserved fish, of species nearly allied to those of the Coal Measures.

KUPPERWUNJ': fortified town of British India, presidency of Bombay, 32 m. e. of Ahmedabad, on a tributary of the river Saburmuttee. It has some trade, and manufactures of soap and pottery. Pop. 13,000.

KURA, *kó'rá*, or KUR, *kór* (anc. Cyrus): principal river of the Caucasus. It rises in the Sahianlu chain, and after a s.e. course of 535 m., falls into the Caspian Sea by several shallow channels, about 60 m. n. of the Persian boundary. Its chief tributaries are the Aras (anc. *Araxes*), the Alazan, and the Yora. The K. has so rapid a course, and changes its channel so frequently, that to bridge it is in much of its course almost impossible.

KURACHEE': see KURRACHI.

KURDISTAN, *kór-dís-tán'* (*Country of the Kurds*): extensive region of w. Asia, lying n.w. and s.e., lat. 34°—40° n. and long. 40°—48° e.; bounded n.e. by Armenia, Azerbaijan, and Irak-Ajemi; and s.w. by the Tigris and Aljezira. K. belongs to the Turkish and Persian monarchies, chiefly to the former, and contains about 50,000 sq. m. Pop. according to Chesney's estimate 3,000,000—probably a great exaggeration, though we have no means of disproving it. The country, with the exception of the tract bordering on the Tigris, is very mountainous, some of the peaks being nearly 13,000 ft. above sea-level; these mountain-ranges divide the surface of the country into fertile valleys and extensive table-lands. The s. part is mostly low and flat, parched in summer, and verdant during the wet season. The country is traversed by the Euphrates, Tigris, Zab-Ala, Zab-Asfal, and Diyala or Shirvan, and contains several lakes, the chief of which are Van and Urumiah. Four-fifths of the inhabitants are Kurds (anc. *Carduchi* and *Gordyaei*), a race partly nomad and partly agricultural, who occupy themselves chiefly with the breeding of cattle, sheep, goats, and horses. The settled portion of the pop. consists of Kurds, Turks, and Persians, who are engaged in agricultural employments. The Kurds, who belong to the Indo-Germanic stock, and speak a language allied to the modern Persian, have from time immemorial stood on the same low level of civilization. They live under chiefs of their own, but are nominally subject to the Porte and the Shah of Persia respectively, though neither government really controls them. The Armenians, who have long suffered much at the hands of plundering nomad Kurds, were by the Berlin Treaty guaranteed to receive from the Porte immunity from Kurdish incursions. In 1880, an extensive Kurdish rising against Persia took place, apparently in the hope of securing independence. The inhabitants, with the exception of the Nestorians (q.v.), who inhabit the valley of the Tigris, profess a debased form of Mohammedanism. The chief towns in Turkish K. are Bitlis (q.v.), Van, Urumia,

KURILE ISLANDS—KURODA.

and Diarbekir; in Persian K., Kermanshah (q.v.) and Irak-Ajemi.

KURILE ISLANDS, *kōr'il* (Jap. name *Chi-Shima*—Thousand Islands): line of islands in the n. Pacific Ocean, belonging to Japan, extending between the s. extremity of Kamtchatka and the Japanese island of Yesso. The islands are 22 in number, 19 of which were possessed by Russia, until 1875, when they were ceded to Japan, in exchange for the half of Saghalien. Area about 3,850 sq. m.; pop. between 200 and 300. Since 1781, no tribute has been collected here. The K. I. all are volcanic. The vegetation is poor; the principal productions being the furs of foxes, wolves, seals, and beavers. Navigation near the islands is difficult.

KURILIAN, a. *kū-ril'i-ān*: applied to a chain of islands in the Pacific extending from the southern extremity of Kamtchatka to Jesso: N. a native or inhabitant of the Kurile Islands.

KURISCHES HAFF, *kōr'ish-ēs hāf*: extensive lagoon, separated from the Baltic Sea by a ridge of sand one to two m. in width. It extends nearly 60 m. along the coast of e. Prussia from Labiau to Memel, where it enters the Baltic by the 'Memel Deeps,' a channel about 1,000 ft. wide, and 12 ft. deep. Its greatest breadth at the s. extremity is about 28 m.; average breadth not above 14 m. The waters of the K. H. are fresh. Its depth is very variable, hence its navigation, accomplished by large flat boats, is both difficult and dangerous. The belt of land is called the 'Kurische Neerung,' and has a few villages upon it.

KURNÁL, *kūr-nawl'*: town of British India, in the dist. of K., in the Punjab, on the right bank of the Delhi canal, 78 m. n.w. of Delhi city. The town is surrounded by a ruinous wall, and is excessively filthy. It has, however, a handsome mosque. Adjoining the town is a military cantonment. Pop. 29,000.

KURNUL, *kūr-nól'*: chief town of a dist. in Madras. Pop. (1881) 20,329.—The *district* is separated on the n. by the Krishna from the Nizam's dominions; it contains 7,788 sq. m.; pop. (1881) 709,305. [Kurnul or Karnúl is distinct from Karnál, a town and dist. in the Punjab.]

KURODA, **KIYOTAKU**: Japanese statesman: b. province of Satsuma, about 1847. He received a thorough native education; was active through the revolution 1868; served as aide to one of the principal generals, and was intrusted with the subjugation of the rebels in the province of Yeso; and under the new govt. became chief of the dept. created for the colonization and industrial improvement of Yeso. In 1871 he was sent on a diplomatic mission to England and the United States, and while in this country organized a staff of geologists, scientists, and educators for service in Japan. In 1874 he was appointed a state councilor and lieut.gen. of the imperial army, and 1876 was in charge of the expedition to Corea. He was the first Japanese to advocate and promote female educa-

KURO-SHIWO—KURSK.

tion, and was author of the plan to secure the education of a certain number of women of Japan in foreign institutions.

KURO-SHIWO (*Black Current*), or **JAPANESE CURRENT**: n.e. deflection of the n. equatorial current of the Pacific Ocean, which strikes the coast of Asia between the Philippine Islands and Japan. It is a warm oceanic stream during the s.e. monsoon, similar to the Gulf Stream of the Atlantic; and while sending many branches to the inland seas and channels of the n.e. coast of Asia, continues as the main body n. to lat. 40°, where it divides into two forks, one flowing along the Kurile Islands, the Kamtchatka peninsula to Behring Sea, thence through Behring Strait into the Arctic Ocean, the other and larger fork crossing the n. Pacific Ocean, curving s. by Alaska and British Columbia, a small part then returning as the n. equatorial current, and the larger part forming the Mexican current that extends along the coasts of Cal. and Mexico. The water of the K.-S. is deep blue in color, and has an average velocity of 3 m. an hour. It is said that flotsam started in this current off Japan will make its way to the Hawaii Islands if left alone; and Japanese junks have been found wrecked on the Pacific coast of America and on the shores of Hawaii.

KURRACHI, *kūr-ra-chē'* (*Karachi*): only port in Sind for sea-going ships, about 12 m. n.w. of the most westerly mouth of the Indus. It was taken by the British 1839, and has since advanced rapidly. K. is cap. of the dist. of K. As the mouth of the Indus is barred by sand-banks, K. is virtually the terminus for the traffic on that river. The anchorage is exposed, but extensive harbor works and docks have been executed in recent years. It is connected by the Sind railway with Hyderabad, thence, by the Indus Steam Flotilla Company's vessels, with Sakar and Mûltan, and from the latter place by the Punjab railway, with Lahore, Amritsir, and Peshawur, etc. Since 1860, Jan., it has had direct communication, by submarine telegraph, with Muscat and Alexandria. The exports of K. are camels, fish, hides, tallow, ghee, oil, bark, salt, indigo, cotton, and grain; and the imports, metals, hardware, silk, cotton, and woolen goods. K. has an active inland trade with Cashmere, Turkestan, Afghanistan, and Tibet. It contains an English church and school. Pop. (1881) 73,500.—The *district* of K. has 14,115 sq. m.; pop. 478,688.

KURSK, *kōrsk*: one of the govts. in the s. of Great Russia; s. of Orel; 17,873 sq. m., the most of which is arable. The province is watered by feeders of the Dnieper and of the Don. The soil being very fertile, large crops of corn are raised, and even in scanty years, K. can supply the neighboring provinces. The people mostly are employed in farm-tillage, though a large number devote themselves to cattle-breeding and orchard-gardening. The principal manufactures are spirits, leather, soap, and saltpetre, and the products are largely exported. Hemp and horses also are important items in the export trade of the province. Pop. (1880) 2,239,397.

KURSK—KÜSSNACHT.

KURSK: chief town of the govt. of K., on the right bank of the Seim, a branch of the Dezna. It dates from the 9th c. It suffered considerably from the ravages of the Tartars and Poles, but is still flourishing, carrying on considerable trade in tallow-melting, rope-making, and tanning. K. is noted for its orchards, the fruit of which is in great request. Near the town, a fair is held in July; when more than \$5,000,000 worth of commodities are disposed of, the chief being manufactured silk and woolen fabrics, sugar, tea, horses, etc. Pop. (1880) 31,754.

KURTZ, kúrts, BENJAMIN, D.D., LL.D.: 1795, Feb. 28—1865, Dec. 29; b. Harrisburg, Penn., nephew of John Nicholas K. After serving in the Lutheran pastorate at Baltimore, Hagerstown, and Chambersburg, he was editor of the *Lutheran Observer*, Baltimore, 1833-62; and was active in founding the Gettysburg (Penn.) Theol. Seminary. He died at Baltimore.

KURTZ, JOHN NICHOLAS, D.D.: abt. 1720-94; b. Lutzelinden, Nassau, Germany: first Lutheran clergyman ordained in America. After studying theology at Giessen and Halle, he came to Penn. as missionary to the Germans, and was stationed at New Hanover, Germantown, and York; but gave long and fruitful labor to the frontier settlements, often at risk of his life from hostile Indians. During the Revolutionary struggle he was an ardent patriot. He died in Baltimore.—His son, **JOHN DANIEL K., D.D.,** b. Germantown, Penn., 1763, was pastor of the principal Lutheran church in Baltimore: he died there.

KURU: name of great celebrity in the ancient or legendary history of India: see MAHÁBHÂRATA.

KURUM, kúr'üm (Kurrám): river rising in Afghanistan near the n. end of the w. Suliman range, and flowing through British territory into the Indus near Isakhel. Through the beautiful, and in many places fertile valley, is the famous pass of K. into Afghanistan, of which so much was heard during the Afghan war 1879-81.

KURUMAN: town and river in the country of the Bechuanas or Betjuans (q.v.), not far n. of the border of Griqualand West. It is an important missionary centre, and was for many years the scene of the labors of Dr. Robert Moffat (q.v.)

KUSH, THE HINDU: see HINDU KUSH.

KUSKOQUIM, kús'ko-kwím, RIVER: second largest stream in Alaska, and the largest whose sources are wholly within the territory; rises in the Chigmit Mountains, and after a s.w. course of about 500 m. empties into Kuskoquim Bay, in Behring Sea, lat. 64° n., long. 162° w. It has valuable mineral deposits along its banks, and the vegetation in its region is more promising, and the timber larger and more accessible than in any other part of w. Alaska. The region was partially explored by special U. S. census officers 1880, and by officers of the U. S. revenue service 1886.

KÜSSNACHT, kús'nächt: village of Switzerland, in the canton of Schwytz, 11 m. w.n.w. of the cantonal cap.,

KUSTENDJI—KUTUSOV.

at the n. extremity of the Lake of Lucerne. It is associated with the charming story of William Tell; and the chapel and other objects mentioned in the narrative are still pointed out to tourists.

KUSTENDJI, *kôs-tên'jê*, or KISTENDJEK: Turkish name of what is now the Roumanian town of CONSTANZA in the Dobrudscha. It stands on the Black Sea coast, at the end of Trajan's wall, and of the railway to Tchernavoda on the Danube. It is fortified. The harbor is exposed, but there is some trade in corn. Pop. 3,000.

KÜSTENLAND, *kūs'ten-lánt* (i.e., *Coast Districts*, Ital. *Litorale*): division of Austria, consisting of the county of Görz and Gradiska, markgratdom of Istria (q.v.), and the town of Trieste with its territory. It lies between Carniola and the Gulf of Venice; 3,048 sq. m. Together with Carinthia and Carniola, it constituted in former times the kingdom of Illyria. (See ILLYRICUM). The surface is mountainous. The soil in general is fruitful; in the lowlands figs ripen with scarcely any cultivation, and wine is extensively made. There is extensive commerce at the various seaports. Pop. (1880) 647,934.

KÜSTRIN, *kūs-trên'*, or CUSTRIN: town of Prussia, and a fortress of the first rank, in the midst of extensive morasses, at the confluence of the Warthe with the Oder, 20 m. n. of Frankfurt. It is a great railway centre. Pop. (1880) 14,069.

KUTAHIAH, *kô-ti'yeh*, or KUTAHIA, or KUTAYA, *kô-tá'yâ* (anc. *Cotiaëum*): important town of Asiatic Turkey, in Anatolia, cap. of the vilayet in which it is situated; 70 m. s.e. of Brusa, on the Pursuk, a tributary of the Sakaria—the ancient Sangarius. Pop. about 50,000.

KUTAHIS: see TRANSCAUCASIA.

KUTCH, n. *kûch* [etym. doubtful]: the packet of vellum leaves in which gold is placed to be beaten. The package for the second beating is called the shoder, for the third a mold.

KUTTENBERG, *kút'ten-bêrch*: mining town of Bohemia, about 40 m. e.s.e. of Prague. Here, 1237, the silver-mines were first worked. The first silver *groschen* were struck here 1300. Silver has not been mined for about 300 years, but copper and lead are mined. Cotton-spinning, cotton-printing, and bleaching are carried on. Pop. (1880) 13,154.

KUTUSOV, *kô-tó'zof*, MICHAEL LAURIONOVITSCH GOLENITSCHIEV, Prince of Smolenskoi: 1745–1813, Apr. 28: Russian field-marshal. He early entered the Russian army, and 1787 was appointed gov.gen. of the Crimea. He distinguished himself in the Turkish war, and was appointed 1805 to command the first *corps d'armée* against the French. He was second in command of the allied army, under Emperor Alexander at Austerlitz. In 1811–1812, he commanded the Russian army in the war against the Turks; in 1812, notwithstanding his advanced age, as commander-in-chief of the army against the French, he

KUVERA—KYANIZE.

obtained a great victory over Davout and Ney at Smolensk. He died at Bunzlau.

KUVERA, *kū-vā'ra*: the Hindu Plutus, or god of wealth. He owes his name—which literally means 'having a wretched (*ku*) body (*vera*)'—to the deformities with which he is invested by Hindu mythology. He is represented as having three heads, three legs, and but eight teeth; his eyes are green, and in the place of one he has a yellow mark; he wears an earring, but only in one ear; and though he is properly of a black color, his belly is whitened by a leprous taint. He is seated in a car (*pushpaka*), which is drawn by hobgoblins. His residence, *Alakā*, is situated in the mines of Mount Kailāsa, and he is attended by the Yakshas, Māyus, Kinnaras, and other imps, anxiously guarding the entrance to his garden, Chaitraratha, the abode of all riches. Nine treasures—apparently precious gems—are especially intrusted to his care.—His wife is a hobgoblin, *Yakshī* or *Yakshinī*; their children are two sons and a daughter. As one of the divinities that preside over the regions, he is considered also to be the protector of the north.

KUYP: see CUYP.

KWANDO (or *Cuando*), usually, but less properly, called Chobe: one of the head streams of the Zambesi (q. v.).

KWANGO (or *Coango*): a large west African river, rising about $11\frac{1}{2}^{\circ}$ s., and a little east of 19° e., and flowing n. and n.w. for 400 miles till it joins the Congo, in long. $15^{\circ} 10'$ e. On it are the great falls of Caparanja, 163 feet high.

KWANG-SI': province: see CHINESE EMPIRE.

KWANG-TUNG': province: see CHINESE EMPIRE.

KWANZA, *kō-ān'za* (also *Cuanza* or *Quanza*): river of w. Africa. It rises in the Kimbandi country, lat $14^{\circ} 20'$ s., long. $18^{\circ} 10'$ e., and flows n.w., 500 m. to the Atlantic, lat. $9^{\circ} 30'$ s., near St. Paul de Loanda. In its course it separates the province of Angola from Benguela, and is navigable to the town of Dindo, 120 m. up from the Atlantic, when the cataracts of Cambambe interrupt further progress. See Capello and Ivens, *From Benguela to Yacca* (1882).

KWEI-CHU', or KWEI-CHOW': province: see CHINESE EMPIRE.

KWICKPAK, *kwik-pāk'*, RIVER: one of the delta arms of the great Yukon river in Alaska; wide, shallow, with numerous expansions like the lakes of the main river, and about 52 m. long. Because of the similarity of features, it is often confounded with the Yukon itself.

KYANITE: see CYANITE.

KYANIZE. v. *kī'ān-iz* [after *Kyan*, the discoverer]: to preserve wood from dry-rot by steeping it in a solution of corrosive sublimate, or other suitable substance. KY'ANI-ZING, imp. KY'ANIZED, pp.-izd.—*Kyanizing* is the most

· KYE—KYTHUL.

efficacious method of preserving vessels from dry-rot (q.v.), by injecting into the pores of the wood a solution of corrosive sublimate; invented by John H. Kyan (1774–1850, b. Dublin).

KYE, n. plu. *kī* [Fris. *kij* (see KINE)]: in *Scot.*, cows. KYLOE, a. or n. *kī'wō*, designating Highland cattle of a small size, particularly those from Skye.

KYLE, *kīl*: central district of Ayrshire (q.v.).

KYMATINE, n. *kī'māt-in* [Gr. *kumatos*, a wave]: an indurated form of asbestos, its composition indicating a passage from tremolite (q.v.) to actinolite (q.v.).

KYRIE, n. *kīr'ī-ē* [Gr. *Kuriē*, O Lord—from *Kuriōs*, Lord]: a word, standing for *Kyrie Eleison*, used to denote those parts of divine service beginning 'O Lord, have mercy.' KYRIE ELEISON, *ē-lī'son* [L. *Kuriē*, O Lord; *elēison*, have mercy—from Gr. *Kuriē elēison*]: form of prayer which occurs in all the ancient Greek liturgies, and is retained in the Rom. Cath. mass. It follows immediately after the Introit, and forms the introduction to the hymn of praise, 'Gloria in excelsis Deo' (Glory to God on high). The retention of the Greek language in this prayer, is one of many evidences of the predominance of the Greek element in the early Roman Church. The same peculiarity occurs in a few others of the Roman services, especially those of Holy Week.

KYRLE SOCIETY, *kērl*: modern association in England, named after the philanthropist John Kyrle, which seeks to bring the influences of natural and artistic beauty into the common lives of the people by means of the decoration of workmen's clubs, of hospital wards, and of dwelling-houses; by the encouragement of window gardening; providing concerts for the people; and in the securing of open spaces, both in town and country, to be laid out as public gardens. The London Kyrle Soc. was the means of securing Burnham Beeches for the public. See ROSS (THE MAN OF).

KYSON SANDS, n. *kī'sōn sǎndz*: a bed of Eocene sand occurring at Kyson or Kingston, Suffolk, celebrated for its yielding the remains of the monkey tribe.

KYTHE, v. *kīth* [AS. *cythan*, to make known—from *cuth*, known]: in OE., to make known; in *Scot.*, to show; to come in sight; to appear in proper character. KYTH'ING, imp. KYTHED, pp. *kītht*.

KYTHUL, or KATHAL, *kī-thūl'*: town in the Karnal district of the Punjab, about 1,000 m. n.w. of Calcutta. It is substantially built of brick, having a lofty palace, which looks down from a beautiful grove on a spacious sheet of water. It was only in 1843 that the territory fell to the English E. India Company, having lapsed through the failure of heirs. K. was for a few years the headquarters of a separate district. Pop. abt. 16,000.

L

L, *l*, *él*: twelfth letter, and ninth consonant of the English alphabet, called *Lamed*, i.e., 'ox-goad,' by the Hebrews, doubtless from its resemblance to that implement—a resemblance still traceable in the Phœnician. **L** belongs to the order of consonants called Liquids, and has the closest affinity to **R**. In some languages, as in Pehlwi, there is only one sign for both; and in others, the one or the other sound is altogether wanting. Hence the numerous substitutions of the one sound for the other in the Aryan languages. Thus, Eng. *plum*, Ger. *pflaume*, from Lat. *prunus*; Eng. *pilgrim*, Lat. *peregrinus*; Gr. or Lat. *epistola*, Fr. *épître*; the Swiss peasants pronounce *Kirche*, *Kilche*; and the Lat. termination *-alis* becomes, after *l*, *-aris*—as, *materi-alis*, *famili-aris*. **L** is also interchangeable with *n*—as, Gr. *pneumon*, Lat. *pulmo*; and, rather strangely, with *D* (q.v.). In certain combinations, the *l* of Latin words has become *i* in Italian—as, *planus*, *piano*; *Florentia*, *Firenze*. In Eng. *l* is often mute, as in *calm*, *yolk*, *should*. In the Scottish dialect, it is mostly mute in the end of words—as, *fa'*, *fu'*, *a'*, for *fall*, *full*, *all*. Similar to this is the frequent melting of *l* into *u* in modern French—thus, *à le* has become *au*; *chevals*, *chevaux*. **L** final in monosyllables preceded by a single vowel is usually found doubled, as in *call*, *tell*, *mill*, *doll*, *bull*.

LA, *lá* [It. and F.]: in *music*, the sixth note of the scale = **A**—thus, *ut, re, mi, fa, sol, la*: see **SOLFEGGIO**.

LA! int. *law* [AS.]: an exclamation of surprise or admiration; look!

LAAGER, n. *lā-äg'ér*, or *låg'ér* [Dut. *laag*, a row, a tier]: in *s. Africa*, any camp fortified by means of wagons or otherwise as a protection against attacks by bodies of natives.

LAALAND, *law'lân*, or **LOLLAND**, *lol'lân* (*low land*): Danish island in the Baltic, at the s. entrance to the Great Belt; area, 452 sq. m. The surface is remarkable flat, and the soil exceedingly fruitful. Forests of beech and oak cover more than 50 sq. m. The chief town is Nakskov—pop. (1880) 5,278—with a good harbor, and considerable trade. At Aatholm, near the Nysted Fiord, there is the largest, and in exotic plants the richest, private garden in Denmark.—Pop. of **L**. with Falster (1880) 97,007.

LA BADIE, *lá bá-dé'*, **JEAN DE**: Pietist leader 1610, Feb. 13—1674, Feb. 13, b. Bourg, near Bordeaux, France. He was educated at the Jesuit school in Bordeaux, where his talents led the Jesuits to secure him for their order.

LABADISTS—LABARRAQUE'S SOLUTION.

Studying the Bible, Augustine, and the Mystics, he adopted much of the doctrine of Augustine with the experimental and practical views of the Pietists. This led to his separation from the Jesuits and to his becoming a preacher to the people in Bordeaux, Paris, and Amiens, where his passionate reformatory preaching made much impression, and finally aroused such persecution that he retired to Gravelle. There he read Calvin's *Institutes*, and embraced the Prot. faith, and was soon appointed preacher and prof. of theology at Montauban—being deemed the most important convert from Rome since Calvin. For a little time he was pastor at Orange on the Rhone, then at the French church in London, and at Geneva, and 1666 at the French church in Middelburg. Though his spiritual fervor had contributed to the moral elevation of the newly-gathered congregations, his reformatory zeal had an increasing tendency to separatism and fanaticism, which at Middelburg brought him into collision with the ecclesiastical authorities, and he was suspended 1668. The result was the formation of a separate congregation or sect of Labadists who held that the church is a company of saints, that only believers are to be baptized, that the Holy Spirit guides the regenerate into all truth, and gives the church through all time the miraculous gifts of apostolic days; that the church should live together in community of goods, eating together; that the children of the church are born without original sin; that marriage with the unregenerate is not binding. The separatist ways of the sect brought them into conflict with the authorities, and they removed from place to place. Invited by Princess Elizabeth, L. and his followers settled at Herford, Westphalia, 1670; but a burst of wild enthusiasm in the congregation alarmed the magistrate, and they were expelled from the city 1672. They migrated to Altona, where L. died, and the sect after a few years disappeared.

LABADISTS, n. plu. *láb'ă-dists* [after *Jean de La Badie*, their founder, originally a Jesuit]: Protestant religious sect of the 17th c., ascetics who chiefly sought reform of morals: see LA BADIE.

LABARRAQUE'S SOLUTION, *lă-bă-râks'*: the *liquor Sodæ Chlorinatæ* of the U. S. and British pharmacopœias. To make it, eighty parts of chlorinated lime (bleaching powder) are mixed with four hundred parts of water. One hundred parts of carbonate of sodium are dissolved in four hundred parts of boiling water, and immediately the latter solution is poured into the first, and the vessel is tightly covered. When cold, enough water is added to make the whole weigh 1,000 parts. It is strained and decanted or siphoned off from any residue. This solution was introduced as a disinfectant first by Labarraque, apothecary of Paris. It has a faint odor of chlorine, alkaline reaction; specific gravity 1.044. It is essentially hypochlorite of sodium (NaOCl) with some chloride of sodium (NaCl). It is administered internally in medicine as a stimulant, antiseptic, and resolvent. It is used in

LABARUM—LABEL.

typhus and scarlet fevers, etc. It is used as an injection and lotion after suitable dilution. It is also employed as a disinfectant.

LABARUM, n. *láb'är-üm* [L. *lábārum*; Gr. *labrōn*]: the famous military standard of the Roman emperor Constantine, designed to commemorate the miraculous vision of the cross in the sky said to have appeared to him on his way to attack Maxentius, and to have led to his conversion to Christianity. It was a long pike or lance, with a short transverse bar of wood attached near its extremity, so as to form something like a cross. On the point of the lance was a golden crown sparkling with gems, and in its centre the mysterious monogram of the cross and the initial letters of the name of Christ, with the occasional addition of the Greek letters *A* and *Ω* (*Alpha* and *Omega*). From the cross-beam depended a square purple banner, decorated with precious stones, and surrounded by a rich border of gold embroidery. The cross was substituted for the eagle, formerly depicted on the Roman standards, and there were sometimes other emblems of the Savior. Between the crown and the cross were heads of the emperor and his family, and sometimes a figure of Christ woven in gold.

LABDANUM: see LADANUM.

LABEDOYERE, *lá-büh-dwä-yär'*, CHARLES ANGELIQUE HUCHET, Count DE: victim of the reaction of 1815 in France: 1786, Apr. 17—1815, Aug. 19; b. Paris; descended from an ancient family in Bretagne. He early entered the army; was adjutant to Marshal Lannes in Spain, 1808, and received a severe wound at Tudela; joined the army in Germany after his recovery; distinguished himself at the capture of Ratisbon, and was Murat's adjutant at the battle of Esslingen. On the evening before the battle of Lützen, Napoleon promoted him to the command of a regt. of infantry. Returning to France severely wounded, in the autumn of 1813, he married a lady of a family very much attached to the Bourbons; and receiving the command of a regt., was posted near Vizelle when Napoleon returned from Elba. He immediately joined him, and was made a lieut. gen. and peer of France. He fought with great gallantry at Waterloo; and after the battle hastened to Paris, when he spoke with great violence against the Bourbons in the stormy sitting of the chamber of peers, 1815, June 22. After the capitulation, he thought to have escaped to America, but was taken prisoner, condemned to death, and shot, notwithstanding every effort that could be made on his behalf.

LABEL, n. *lā'bēl* [OF. *label* and *lambel*, a rag attached but slightly to the whole garment or main body: Ger. *lappen*, a rag, a lap]: a small slip of paper or parchment attached to anything, on which a writing is inscribed to tell its nature or contents, or on which an address is written—in *law*, such a slip may be significant of proprietary rights (see TRADE-MARK); in *her.*, a horizontal strip with three pendants or tassels (see below); a thin brass rule, having a

LABEL—LABIATE.

sight at one end, used for taking altitudes; a paper annexed to a will, as a codicil; ribbon pendant at the sides of a mitre or coronet: **V.** to attach a label to. **LA'BELLING**, or **LABELING**, *imp.* **LA'BELLED**, or **LABELED**, *pp.* -*bèld*.

LABEL, *n.* *lā'bēl*, or **LABELLUM**, *n.* *lā-bēl'lūm* [*L. labellum*, a little lip—from *labrum*, a lip: also *comp. L. labiūm*, a lip]: in *bot.*, a lip, or lower lip only; the third of the inner petals of an orchid.

LA'BEL, or **LAM'BEL**, or **FILE**, in **Heraldry**: mark of cadency which distinguishes the eldest son in his father's lifetime; familiar in Britain from its entering into the composition of the arms of the Prince of Wales and other members of the royal family. It consists of a horizontal stripe or fillet, with three points depending from it. When the mark of cadency itself is designated a *file*, its points are called *labels*. It is said that the eldest son's eldest son should wear a **L.** of five points in his grandfather's lifetime, and, similarly, the great-grandson a **L.** of seven points, two points being added for each generation. The **L.** extended originally quite across the shield, and sometimes occupied the upper, though now it is always placed in the lower part of the chief: the points, at first rectangular, assumed in later times the form called *pattée*, *dovetailed*, or *wedge-shaped*; and more recently, the **L.** ceased to be connected with the edges of the shield. From the time of the Black Prince, the eldest son of the sovereign of England has invariably differenced his arms with a **L.** of three points *argent*, and the practice has been for the younger sons also to bear labels, which are sometimes of other colors and more points, and differenced by being charged with *fleurs-de-lis*, castles, *torteaux*, hearts, crosses, etc., as directed by the sovereign by sign-manual registered in the College of Arms. Like other marks of cadency, labels are sometimes borne as permanent distinctions by a particular branch of a family.



LABIAL, *n.* *lā'bī-āl* [*mid. L. labiālis*, pertaining to the lips—from *L. labiūm*, a lip]: a letter whose sound is uttered by means of the lips—the **LABIALS** are *b*, *p*, *m*, *v*, *f*: **ADJ.** formed or uttered by the lips. **LA'BIALY**, *ad.* -*lī*. **LA'BIALISM**, *n.* -*izm*, the art of uttering certain sounds by means of the lips.

LABIATE, *a.* *lā'bī-āt*, or **LA'BIATED**, *a.* -*ā-tēd* [*L. labiātus*, having a labium or lip—from *labiūm*, a lip]: formed with lips; in *bot.*, applied to irregular gamopetalous flowers with an upper and under portion separated more or less by a hiatus or gap. **LABIATÆ**, *n. plu.* *lā'bī-ā'tē* (*Lamiaceæ* of Lindley), *nat. ord.* of exogenous plants, containing almost 2,500 known species, mostly natives of temperate climates. They are herbaceous, or more rarely half-shrubby, and have 4-cornered stems and opposite branches; and opposite leaves, without stipules, abounding in receptacles of volatile oil. The flowers are often in cymes or heads, or in whorls; sometimes solitary. The calyx is inferior, with five or ten teeth, or 2-lipped. The corolla is hypogynous,

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2-lipped, the lower lip 3-lobed. The stamens are four, two long and two short, or by abortion only two, inserted into the corolla. The ovary is deeply 4-lobed, seated in a fleshy disk, each lobe containing a single ovule; there is a single style with a bifid stigma. The fruit consists of 1-4 *achenia*, inclosed within the persistent calyx.—A general characteristic of this order is an aromatic fragrance, which in many species is very agreeable, and makes them favorites in gardens. Some are weeds with unpleasant odor. Some are used in medicine, and others in cookery for flavoring. Mint, marjoram, rosemary, lavender, sage, basil, savory, thyme, horehound, balm, patchouli, germander, and dead nettle are examples of this order.

LABIODENTAL, a. *lā'bi-ō-dēn'tāl* [L. *labium*, a lip; *dentem*, a tooth]: pronounced by means of the lips and teeth, as the letters *f* and *v*.

LABIS, n. *lā'bis* [Gr. spoon]: in the administration of the Lord's Supper in the Greek Church, the implement in which the bread and wine mingled are served to the communicant.

LABIUM, n. *lā'bi-ŭm* [L. *labium*, a lip]: the lower lip of articulate animals; the under lip of an insect; the inner lip of a shell. **LA'BIA**, n. plu. *-bi-ā*, in *bot.*, the two divisions of an irregular gamopetalous flower separated by a hiatus or gap.

LABLACHE, *lā-blāsh'*, **LUIGI**: celebrated operatic singer: 1795-1858; b. Naples, whither his father and mother, who were French, had fled from Paris during the horrors of the Revolution. His first engagement as a singer was at the San Carlino Theatre at Naples, 1812; he afterward sang, with much success, in La Scala, Milan, and in Vienna; singing also at the San Carlo, at Naples, during the intervals of the Vienna season. His first appearance in London 1830, created a great public sensation; and for a number of years, he resided alternately in the French and English capitals, singing in the Paris and London season. He died at Naples. His voice, a deep bass, has hardly ever been equalled either in volume or quality; and his acting, particularly in the characters of 'Figaro' and 'Leporello,' was almost as remarkable as his singing. He was author of a treatise on singing, published 1843; and he long gave instructions in singing to Queen Victoria.

LABOR, n. *lā'bér* [OF. *labour*, labor—from L. *labōrem*: labor: It. *labore*; F. *labeur*]: exertion, bodily or mental, producing fatigue; the work done or to be done; toil; effort; undertaking; the pangs and efforts of child-birth; V. to work at; to exert one's powers of body or mind; to toil; to strive; to pitch and roll, as a ship; to struggle, to endure the pangs of child-birth. **LA'BORING**, imp.: **ADJ.** exerting bodily strength or intellectual power; engaged at work not requiring skill; toiling. N. the act of laboring; the pitching and rolling of a vessel in a heavy sea. **LA'BORED**, pp. *-bérđ*: **ADJ.** bearing marks of labor or effort in execution; opposed to easy or free. **LA'BORER**, n. *-ér*, one who is engaged at coarse and toilsome work

LABOR.

requiring little skill. **LABORIOUS**, a. *lă-bō'ri-ŭs* [F. *laborieux*—from L. *labōriōsus*]: using labor requiring fatiguing exertions; toilsome; difficult; diligent. **LABORIOUSLY**, ad. *-lī*. **LABORIOUSNESS**, n. *-nēs*, the quality of being attended with toil; diligence. **LABOR-*SAVING***, adapted to supersede or lessen human labor or toil, said of implements or machinery. **LABORSOME**, a. *-sŭm*, in *OE.*, laborious.—**SYN.** of 'labor, n.': work; exertion; painstaking; drudgery; task.

LABOR, in Political Economy: term dependent for its meaning on the circumstances in which it is used, and scarcely to be defined scientifically without occasioning misunderstanding. The best service toward rendering it intelligible, is to clear away some attempts that have been made to subject it to scientific analysis and definition. It has been separated into productive and unproductive, but no such division can be fixed. A turner who puts a piece of wood on his lathe and makes a top is of course a productive laborer. The same quality cannot be denied to the man who beams a web for the loom; but if he shares in the production of the cloth, so does the overseer who walks about the manufactory and adjusts its industrial arrangements. Having included him, we cannot well say that the policeman, who keeps order in the district, and enables its manufacturers to go on, should be excluded. Again, the man who contributes to make a book, of course appears as a productive laborer; but what the author contributes is not matter, but intellect; and it would be difficult to maintain that he ceases to be productive if he deliver such matter in an oration or a sermon. We can hardly count the distiller, who makes a glass of whisky, a productive laborer, and exclude the musician, who produces another and less dangerous excitement. It is equally impossible to draw the line between bodily and intellectual labor, since there is scarcely a work to which man can put his hand which does not require some amount of thought. A distinction between capital and labor has often been attempted, with very fallacious and dangerous results. Capital in active operation infers that its owner labors. If the capital is not labored, the owner must be content to let it lie at ordinary interest. If he want profit from it, he must labor, and often severely. In a large manufactory, where the proprietor is supposed to be a gentleman at large, drawing his fortune from the sweat of the brow of his fellow-men, he is often the most anxious and the hardest-worked man in the whole establishment.—On the general subject of Labor as related to political economy, see **SLAVERY: MACHINERY: GUILDS: TRADES-UNION: LABOR, KNIGHTS OF: SOCIALISM: INTERNATIONAL WORKING MEN'S ASSOCIATION: COMMUNISM: BLANC: ATELIERS NATIONAUX: MASTER AND SERVANT: HIRING: FACTORY: FACTORY ACTS: CAPITAL: COMPETITION: POLITICAL ECONOMY.**

LABOR, DEPARTMENT OF: established by the U. S. congress 1888, June 13; an enlargement of the Bureau of Labor created and attached to the department of the inte-

LABOR.

rior, 1884, June 27. It is in charge of a commissioner who is directed to acquire and diffuse information on subjects connected with labor in the most general and comprehensive sense of that word, and especially on its relation to capital, hours of labor, earnings of laboring men and women, and the means of promoting their material, social, intellectual, and moral prosperity. He is directed also to report at intervals of not less than two years the general condition of the leading industries of the country; to investigate the causes of, and facts relating to, all controversies and disputes between employers and employés as they may occur; to obtain, if desirable, information concerning the condition of labor in foreign countries; and to report annually to the pres. and the congress.

LABOR, KNIGHTS OF: American organization of working men and women, founded by Uriah H. Stevens in Philadelphia, 1869. Local or subordinate 'assemblies' are formed with men and women, or men or women respectively, of any one or more trades, or no trade whatever, excepting lawyers, bankers, brokers and liquor dealers. District 'assemblies' are composed of three delegates from each local body in its jurisdiction. A 'trade district' assembly is composed of representatives of any one trade or affiliated trades; a 'mixed district' is formed of assemblies of every trade having less than five locals, which number is necessary before a trade can be organized as a distinct district. The 'general assembly' is composed of delegates elected by the several districts, according to the members in good standing, one delegate for every 1,000 members in the district. The supreme executive authority is designated the 'general master workman' (see POWDERLY, TERRENCE VINCENT), who is directly aided by a general executive board of three members. The declared aims of the order are: 'I. To make industrial and moral worth, not wealth, the true standard of individual and national greatness. II. To secure to the workers the full enjoyment of the wealth they create; sufficient leisure in which to develop their intellectual, moral, and social faculties; all of the benefits, recreation, and pleasures of association; in a word, to enable them to share in the gains and honors of advancing civilization.' To secure these results, the members agree to endeavor to secure for both sexes equal pay for equal work; to shorten the hours of labor by a general refusal to work for more than eight hours per day; and to persuade employers to agree to arbitrate all differences which may arise between them and their employés, in order that strikes may be rendered unnecessary. The order reached its greatest strength in the year of the greatest number of and largest losses from trade strikes, 1886, reporting July 1 a total membership of 729,677, of whom 702,924 were in good standing, and 26,753 in arrears. 1887, July 1, there were 485,000 reported in good standing, 50,000 in arrears; total 535,000; and 1888, July 1, 259,518 in good standing, 37,900 in arrears and not reported on: total 297,418. The local assemblies in good standing were 5,666; receipts for previous year

LABORATORY—LABOR STATISTICS.

\$222,507; expenditures \$222,342. The growth of the order, particularly from 1876, was rapid; but its decline from 1886 was significantly sharp. General Master Workman Powderly constantly urged the brotherhood to seek arbitration, avoid boycotting, and engage in strikes only when all other means of obtaining relief had failed, and the strikes were properly ordered by competent authority. But the violence and excesses committed during the memorable 'railroad strikes,' and the subsequent ones in specific trades and against individual employers, created a revulsion in popular sentiment, and led employers themselves to combine for mutual protection. In many instances, unsuccessful strikers were taken back by their employers only on condition of their renouncing the labor order and their particular labor union; and this treatment was the most potent element in disintegrating the order.

LABORATORY, n. *láb'ô-ră-tér-i* [*F. laboratoire*, a laboratory—from *OF. elaboratoire*, an elaboratory or workshop—from *L. elaborātus*, worked out, elaborated—from *L. labor*, labor]: place where chemical preparations or medicines are manufactured or sold; a druggist's shop; the workroom of a chemist, a pyrotechnist, etc.—*The Royal Laboratory*, in Woolwich Arsenal, England, is one of the most extensive and complete establishments of the kind in the world—dating in its present form from 1855.

LABOR BUREAU: organization, chiefly of German and Irish emigrant societies of New York, conducted in connection with the N. Y. Commissioners of Emigration at Castle Garden, New York. It was designed to furnish homes and employment for emigrants landing in New York with no destination in view, and to care for them in the interval. Its work was rendered gratuitously to emigrant and employer, but it required the latter to provide transportation for any person there employed to the place of work. For many years it cared for a large number of emigrants, in some years as many as 25,000; but within a few years the whole system of forwarding emigrants from all parts of the world to the United States has been changed, and with restrictive laws against pauper labor, and the establishment of emigrant 'booking' agencies all over Europe and America, very few immigrants are now landed who have not a knowledge of their immediate destination. See **CLEARING HOUSE**, **RAILWAY: IMMIGRATION**, into the United States.

LABORERS, LAWS AFFECTING: see **MASTER AND SERVANT: HIRING: FACTORY ACTS**: also **TRADES-UNION**.

LABOR STATISTICS, BUREAUS OF: departments of state govts. created for the purpose of gathering and diffusing information relating to the conditions of labor in the states. The first was established by Mass. 1869; and then followed Penn. 1872; Conn. 1873; Mo. 1876, enlarged 1883; O. 1877; N. J. 1878; Ill. and Ind. 1879; N. Y., Cal., Mich., Wis., 1883; Io. and Md. 1884; Kan. 1885; and R. I., Neb., N. C., Me., Minn., and Colo., 1887. The chief officers of

LABOUCHERE—LABOULAYE.

these bureaus have formed a National Assoc. of Commissioners of Bureaus of Statistics of Labor and Industry.

LABOUCHERE, *lá-bó-shün'*, HENRY DU PRE: statesman: b. London, 1831; nephew of the late Lord Taunton. He was educated at Eton College; entered the diplomatic service 1854; was attaché at Washington, Munich, Stockholm, Frankfort, St. Petersburg, and Dresden; became third sec. 1862, and second sec. at Constantinople 1863; retired from the service 1864; was elected member of parliament for Windsor 1865, Middlesex 1867, and since 1880 has sat for Northampton. He became a Gladstone liberal 1886. He is editor and proprietor of the London journal *Truth*, and part proprietor of the *Daily News*. His parliamentary career has been marked by his persistent advocacy of his bill to abolish the hereditary principle of the house of lords, and by his pungent, humorous speeches. He knows everybody, and makes *Truth* the brightest and most gossipy of all English publications.

LABOULAYE, *lá-bó-lá'*, ÉDOUARD RENÉ LEFÉBVRE DE: 1811, Jan. 18—1883, May 25; b. Paris: jurist, statesman, and versatile man of letters. While in the type-founders' trade he studied law and engaged in literary work. In 1839 he published a remarkable *Histoire du droit de propriété foncière en Europe depuis Constantin jusqu'à nos jours*, which was crowned by the Acad. of Inscriptions and Belles-Lettres; and 1842 an *Essai sur la vie et les doctrines de Frédéric-Charles de Savigny*. He was admitted to practice at the royal court in Paris 1842; in the following year published the *Recherches sur la condition civile et politique des femmes, depuis les Romains jusqu'à nos jours*, which was crowned by the Acad. of Moral and Political Sciences; and 1845 published an *Essai sur les lois criminelles des Romains concernant la responsabilité des magistrats*, also crowned. In 1845 he was elected a member of the Acad. of Inscriptions and Belles-Lettres, 1849 became prof. of comparative legislation at the College of France, and while distinguishing himself as an expounder of the principles of legal science became an ardent republican. He published a *Histoire politique des États-Unis*, 1620–1789, 3 vols. (1855–66); *Les États-Unis et la France* (1862), *L'État et ses limites* (1863), *Paris en Amérique* (1863), *Les mémoires et la correspondance de Franklin* (1866), and *Lettres politiques* (1872). He became a member of the national assembly, and chairman of the committee on higher education 1871, sec. of the committee of 30 on the republican constitution 1874, was elected a life senator 1875, was administrator of the College of France 1873, 76, 79, and resumed his law lectures 1877.—L. was a writer of wonderful versatility, with great erudition and originality, and a clear, elegant, and quaintly modulated style.

LABRADOR.

LABRADOR, *lăb-ra-dawr'* or *lab-ra-dōr'*: north-eastern peninsula of the N. American continent, between Hudson's Bay and the Gulf of St. Lawrence; but sometimes limited to the e. portion of this area. The coasts of L. were sighted by Cabot, after whom came Basque whalers and fishermen; and from the Basque skipper L. the country takes its name. In the wider sense, L. extends from 49° to 63° n. lat., and from 55° to about 65° w. long. The greatest length from the Straits of Belle Isle to its n. cape, Wolstenholme, is more than 1,000 m.; area near 450,000 sq. m., or larger than France and Germany combined. The Atlantic coast is wild and precipitous, part of it being cut into deep fiords, running far inland. Most of the interior is occupied by a sterile plain, rising as much as 2,240 ft. above the sea; stunted spruce and birch are found in some of the hollows and glens. The inner parts of L. have been but very imperfectly explored; there are numerous rivers two and three miles wide at their mouths, flowing toward the Atlantic and toward Hudson's Bay: in the lower part of their valleys, large trees are found. There are many lakes. The rivers abound in fish; and over the barren wilds roam reindeer, bears, wolves, foxes, hares, martens, and otters. Of the mineral resources little is known, but iron ore, limestone, and Labradorite (q.v.) are found. Much rain falls in summer near the coast. The climate is very rigorous, owing mainly to the ice-laden arctic current which washes the shores. In sheltered places, the thermometer sometimes reaches 86° in summer; but over a great part of the surface snow lies from Sep. till June. The mean annual temperature at the missionary stations varies from 22° to 27° . The winter is dry, bracing, frosty, and pleasant.

By far the most important element of the wealth of L. is the fish of its waters. As many as 30,000 fishermen from Newfoundland, Canada, and the United States are here in the fishing season. There are a number of permanent settlements on the coast region, including several Moravian missionary stations—Nain (founded 1771), Okkak Hebron, Hopedale. The total exports have an annual value of £300,000, but the catch of fish is valued at £1,000,000.

Basques and Bretons successively settled in L. Since 1809, the coast district from the entrance of Hudson's Strait along the Atlantic to 52° n. lat. has been, and still is, attached to Newfoundland. (To this section the name of L. is often limited.) The s. portion, draining into the St. Lawrence Gulf, is part of the province of Quebec; the w. section, whose waters flow to Hudson's Strait and Hudson's Bay, is now the N. E. Territory of the Dominion of Canada. (Part of this region used to be called East Main.) Another derivation of the name than that given is, that L. was so called by Portuguese explorers; *Terra Laborador* (cultivable land), as sad a misnomer as Greenland was finally proved to be in

LABRADORITE—LABRUYÈRE.

1883. — Total permanent pop. of L. about 12,500, one-third on the St. Lawrence coast. On the Atlantic coast are 2,000 Eskimo, and 2,500 whites (mostly of French Acadian stock), and in the interior 4,000 Indians.

LABRADORITE, n. *lăb'ră-dôr'it*, also LABRADOR FELSPAR [from locality where first found]: variety of disseminated felspar having a peculiar pearly and iridescent play of colors when the light falls on it in certain directions. L. is common as a constituent of dolerite, greenstone, and other rocks. It takes a fine polish, and is cut into snuff-boxes and other articles. It was discovered by the Moravian missionaries on the coast of Labrador.

LABRADOR' TEA: shrub of the heath family; evergreen, of low growth, found in moist places northward from the middle states; also in n. Europe. Of the leaves, which when crushed have some fragrance, tea is made in some countries, e.g. Labrador; and they are reported as used in Russia in tanning and in brewing. A narcotic property is ascribed to the plant.

LABRIDÆ, *lăb'rî-dē*: family of osseous fishes, ranked by Cuvier in the order *Acanthopterygii* (q.v.), by Müller in *Pharyngognathi* (q.v.). They are divided into *Cteno-labridæ* and *Cyclo-labridæ*, the former having ctenoid, the latter, cycloid scales; the former comparatively a small, the latter, a very numerous family. They are generally oval or oblong, and more or less compressed, with a single dorsal fin, spinous in front, and the jaws covered by fleshy lips. Their colors are generally brilliant. They abound chiefly in tropical seas. The most valuable of the family is the Tautog (q.v.) of N. America. To this family belong the Wrasses and the Parrot-fishes, one of which is the celebrated *Scarus* of the ancients.

LABROSE, a. *lă-brôs'* [L. *labrum*, a lip]: having thick lips.

LABRUM, n. *lă'brüm* [L. *labrum*, a lip]: the mouth-cover or lip-like shield of an insect's mouth; the outer lip of a shell; the upper lip of articulate animals. LABRA, n. pl. *lă'bră*.

LABRUYÈRE, *lă-brü-e-yär'*, JEAN DE: French essayist, noted for delicate delineations of character: 1645, Aug.—1696; b. Dourdan, Normandy. He was brought to the French court at the recommendation of Bossuet, and became one of the tutors of the Dauphin, whose education Fénelon superintended. He spent the whole remainder of his life at court, in intimate intercourse with the most accomplished men of his time. The work on which his high reputation rests, *Les Caractères de Théophraste, traduits du Grec, avec les Caractères ou les Mœurs de ce Siècle* (Par. 1687), has gone through many editions, some of them annotated, and has been translated into several languages.

LABUAN—LABURNUM

LABUAN, *lâ-bô-ân'*: island of the Malayan archipelago, abt. 30 m. off the n.w. coast of Borneo. It measures 10 m. by five; lat. and long. of its centre, $5^{\circ} 22'$ n., and $115^{\circ} 10'$ e. Small as it is, it is peculiarly valuable. Besides possessing a good harbor, it contains an extensive bed of excellent coal, worked by a company of British capitalists formed 1862; and having become, 1846, a British possession, it is a prospective nucleus of civilization for the surrounding islands. It is a see of the Church of England. Exports (1881), £187,108; imports, £174,828. Pop. 6,000.

LABURNUM, n. *lă-bér'nŭm* [*L. laburnum*]: small tree (*Cytisus Laburnum*, ord. *Leguminosæ*), native of the Alps and other mountains of s. Europe, much planted in shrubberies and pleasure-grounds in Britain, for its glossy foliage and its large pendulous racemes of yellow flowers, abundant in May and June. It is often mixed with lilac, and when the latter preponderates, the combination has a fine effect. In favorable circumstances, *L.* sometimes attains a height of 20, or even 40 feet. It is very hardy, and nowhere flourishes better than in n. Scotland. It is of rapid growth, yet its wood is hard, fine-grained, and very heavy, of a dark-brown or dark-green color, and much valued for cabinet-work, inlaying, and turnery, and for making knife-handles, musical instruments, etc. The leaves, bark, etc., and particularly the seeds, are nauseous and poisonous, containing *Cytisine*, an emetic, purgative, and narcotic principle, found in many allied plants. Accidents from *L.* seeds are not unfrequent to children; but to hares and rabbits, *L.* is wholesome food, and they are so fond of it, that the safety of other trees in a young plantation may be insured by introducing *L.* plants in great number, which spring again from the roots when eaten down.—A fine variety of *L.*, called SCOTCH *L.*, by some botanists regarded as a distinct species (*C. Alpinus*), is distinguished by broader leaves, and by darker yellow flowers, produced later in the season than those of the common or *English laburnum*.

LABYRINTH.

LABYRINTH, n. *lăb'î-rînth* [F. *labyrinthe*—from L. *labyrinth'us*; Gr. *laburinth'os*]: place full of lanes or alleys; place full of intricacies or inextricable windings; a maze; an inexplicable difficulty; the internal ear, from its complex structure. **LAB'YRINTH'IAN**, a. *-rînth'î-ăn*, pertaining to or resembling a labyrinth; intricate; winding; also **LAB'YRINTH'INE**, a. *-în*. **LAB'YRINTH'IC**, a. *-îk*, having the character of a labyrinth. **LAB'YRINTH'IFORM**, a. *-î-fawrm* [L. *forma*, shape]: formed like a labyrinth. *Note.*—**LABYRINTH** was the strange accumulation of chambers and tortuous passages anciently existing on the shores of Lake Mœris, Egypt, by some asserted to derive its name from King *Labarys*, its founder. The following etymology is also suggested: *ra-hunt* or *la-hunt* was the old Egyptian for the mouth of a reservoir, which Lake Mœris was, hence *ra-pe-ro-hunt* or *la-pe-lo-hunt*, the temple of the mouth of the reservoir; then from *laperohunt* we get to *laperint* and *labyrinth*.—**SYN.** of 'labyrinth': intricacy; windings; confusion.

LAB'YRINTH: name of some celebrated buildings of antiquity, consisting of many chambers or passages difficult to pass through without a guide, and the name hence applied to a confused mass of constructions. In the hieroglyphics, the word *mera* signifies a 'labyrinth.' The principal labyrinths of antiquity were the Egyptian, the Cretan, and the Samian. The Egyptian, of which the others seem to have been imitations, was at Crocodilopolis, close to the lake *Mœris*, near the present pyramid of Biakhmu. According to the classical authors, it was built by an Egyptian monarch named Petesuchis, Tithoes, Imandes, Ismandes, Maindes, or Mendes. The recent discovery of the remains of this building by Lepsius has, however, shown that the city was founded by Amenemha I., of the 12th Egyptian dynasty, about B.C. 1800, and that this monarch was probably buried in it, while the pyramid and south temple were erected by Amenemha III. and IV., whose prænomens resemble the name of Mœris, and their sister, Sebeknefru or Scemio-phris, appears to have been the last sovereign of the 12th dynasty. Great confusion prevails in the ancient authorities as to the object of the building, which contained 12 palaces under one roof, supposed to have been inhabited by the Dodecarchy, or 12 kings who jointly reigned over Egypt before Psammetichus I.; while, according to other authorities, it was the place of assembly of the governors of the nomes or districts, 12 in number according to Herodotus, 16 according to Pliny, 27 according to Strabo. The L. was of polished stone, with many chambers and passages, said to be vaulted, having a peristyle court with 3,000 chambers, half of which were under the earth, and the others above ground, which formed another story. The upper chambers were decorated with reliefs; the lower were plain, and contained, according to tradition, the bodies of the 12 founders of the building, and the mummies of the

LABYRINTH.

sacred crocodiles, conferring on the building the character of a mausoleum, probably conjoined with a temple, that of Sebak, the crocodile-god, and so resembling the Serapeium. Herodotus and Strabo both visited this edifice, which was difficult to pass through without the aid of a guide. It stood in the midst of a great square. Part was constructed of Parian marble—probably rather arragonite—and of Syenitic granite pillars; had a staircase of 90 steps, and columns of porphyry; and the opening of the doors echoed like the reverberation of thunder. For a long time, there was great doubt whether any remains of the building existed, and it was supposed to have been overwhelmed by the waters of the lake Mœris; and although P. Lucas and Letronne thought they had discovered the site, its rediscovery is due to Lepsius, who found part of the foundations or lower chambers close to the site of the old Mœris Lake, or modern Birket-el-Keroun. According to Pliny, it was 3,600 years old in his days.

The second, or next in renown to the Egyptian, was the L. of Crete, supposed to have been built by Dædalus for the Cretan monarch Minos, in which the Minotaur was imprisoned by his orders. Although represented on the Cretan coins of Cnossus sometimes of a square, and at other times of a circular form, no remains of it were recorded as found even in times of antiquity, and its existence was supposed to be fabulous. The only mode of finding the way out of it was by means of a skein of linen thread, which gave the clue to the dwelling of the Minotaur. The tradition is supposed to have been based on the existence of certain natural caves or grottoes, perhaps the remains of quarries, and it has been supposed to have existed n.w. of the island, near Cnossus, while a kind of natural labyrinth still remains close to Gortyna. The idea is supposed to have been derived from the Egyptian.

The third L. of antiquity was the Samian, constructed by Theodorus and artists of his school, in the age of Polycrates (B.C. 540), supposed to be a work of nature embellished by art, having 150 columns erected by a clever mechanical contrivance.—Inferior labyrinths were at Nauplia, at Sipontum in Italy, at Val d'Ispica in Sicily, and elsewhere; and the name of labyrinth was applied to the subterraneous chambers of the tomb of Porsena, supposed to be that now existing as the Poggio Gazella, near Chiusi. Labyrinths called mazes have been fashionable in gardening, being an intricate network of pathways inclosed by thick hedges, so bewildering to one who entered that he could scarcely find either centre or exit. The best known in modern times is the Maze at Hampton Court.

Herodotus, ii. 148; Diodorus, i. 61, 97, iv. 60, 77; Pausanias, i. 27; Strabo, x. 477, xviii. 111; Plutarch, *Theseus*, 15; Pliny, *N. H.*, xxvi. 19, 3, 83; Isidorus, *Orig.*, xv. 2, 6; Höck, *Creta*, i. 447; Prokesch, *Denkw.*, i. 606; Duc de Luyne, *Annali*, 1829, 364; Lepsius, *Einsleit.*, p. 268.

LABYRINTHODON.

LABYRINTHODON, n. *lăb'î-rînth'ô-dôn* [Gr. *labu-rinth'os*, a labyrinth; *odon'ta*, a tooth]: in *geol.*, a batrachian of the New Red Sandstone. LAB'YRINTHODON'TIA, n. plu. *-dôn'shî-ă*, or LAB'YRINTH'ODONTS, n. plu. *-dôn'ts*, one of the thirteen orders into which Professor Owen arranges the *Reptilia*, living and extinct—so named from the complex structure of the teeth as seen in section. LABYRINTHIBRANCH'IDÆ, see ANABASIDÆ.

LABYRINTHODON, *lăb-î-rînth'ô-dôn*: genus of gigantic sauroid batrachians, found in the New Red Sandstone measures of Great Britain and the continent. The remains of several species have been described, but all so fragmentary, that no certain restoration of the genus can yet be made. The head was triangular, having a



Labyrinthodon Pachygnatus.

crocodilian appearance both in the shape and in the external sculpturing of the cranial bones, but with well-marked structural modifications in the vomer, and in the mode of attachment of the head to the atlas, that stamp it with a batrachian character, conspicuous above



Footprint and Rain-drops.

the apparent saurian resemblances. The mouth was

LABYRINTHODON.

furnished with a series of remarkable teeth, numerous and small in the lateral rows, and with six great laniary teeth in front. The bases of the teeth were anchylozed to distinct shallow sockets. Externally, they were marked by a series of longitudinal grooves, which correspond to the inflected folds of the cement. The peculiar and characteristic internal structure of the teeth is very remarkable, and to it these fossils owe their generally accepted generic name of Labyrinthodon (labyrinth-tooth). The few and fragmentary bones of the body of the animal exhibit a combination of batrachian and crocodilian characters, leaning, however, on the whole, more to the first type. The restoration exhibited in the cut is that suggested by Owen; it must be considered as to a large extent imaginary, owing to the imperfect materials for such a work. In the same deposits there have been long noticed the prints of feet, which so much resembled the form of the human hand, that Kaup, their original describer, gave the generic name of Cheirotherium to the great unknown animals which produced them. From the fore foot being much smaller than the hind foot, he considered that they were the impressions of a marsupial; but this relative difference in the feet exists also in the modern batrachians; and the discovery of the remains of so many huge animals belonging to this order, in these very strata, the different sizes of which answer to the different foot-prints, leave little doubt that the cheirotherian foot-prints were produced by labyrinthodont reptiles.

LAC.

LAC, n. *lāk* [Pers. *lak*, an insect nidus on certain trees of India which yields a beautiful red-lake: Ger. *lack*; Dan. *lak*; F. *laque*, rose or ruby color]: a resinous substance obtained from the eggs and remains of the insect *Coccus lacca* as found on certain trees, used in the manufacture of sealing-wax, varnishes, dyes, etc. SHELL-LAC, lac in the form of a thin crust. LACCIC, a. *lāk'sik*, applied to an acid produced from lac. LAC'CINE, n. *-sin*, a yellow substance obtained from shell-lac.—*Lac* is the general name under which the various products of the lac insect (*Coccus lacca*) are known. The curious hemipterous insect which yields these valuable contributions to commerce is in many respects like its congener the Cochineal Insect (*Coccus cacti*), but it also differs essentially from it: the males alone, and those only in their last stage of development, have wings, therefore the whole life of the creature is spent almost on the same spot. They live upon the twigs of trees, chiefly species of *Butea*, *Ficus*, and *Croton*, and soon entomb themselves in a mass of matter, which oozes from small punctures made in the twigs of the tree, and which thus furnishes them with both food and shelter. It is said that to each male there are at least 5,000 females, and the winged males are at least twice as large as the females. When a colony, consisting of a few adult females and one or two males, find their way to a new branch, they attach themselves to the bark, and having pierced it with holes, through which they draw up the resinous juices upon which they feed, they become fixed or glued by the superfluous excretion, and after a time die, forming by their dead bodies little domes or tents over the myriads of minute eggs which they have laid. In a short time, the eggs burst into life, and the young, which are very minute, eat their way through the dead bodies of their parents, and swarm all over the twig or small young branch of the tree in such countless numbers as to give it the appearance of being covered with a blood-red dust. They soon spread to all parts of the tree where the bark is tender enough to afford them food, and generation after generation dwells upon the same twig until it is enveloped in a coating, often half an inch in thickness, of the resinous exudation, which is very cellular throughout, the cells being the casts of the bodies of the dead females. During their lifetime, they secrete a beautiful purple coloring matter, which does not perish with them, but remains shut up in the cells with the other results of decomposition.

The small twigs, when well covered, are gathered by the natives, and are placed in hot water, which melts the resinous matter, liberates the pieces of wood and the remains of the insects, and dissolves the coloring matter. This is facilitated by kneading the melted resin while in the hot water; it is then taken out and dried, and is afterward put into strong and very coarse cotton bags,

LAC.

which are held near enough to charcoal fires to melt the resin without burning the bags. By twisting the bags, the melted resin is then forced through the fabric, and received in thin curtain-like films upon strips of wood. This hardens as its surface becomes acted upon by the air, and being broken off in fragments, constitutes the shell-lac of commerce. The best shell-lac is that which is most completely freed from impurities, and approaches most to a light orange brown color. If the coloring matter has not been well washed out, the resin is often very dark, consequently, we find the following varieties in commerce—orange, garnet, and liver. Much that is squeezed through the bags falls to the ground without touching the sticks placed to catch it; small quantities falling form button-like drops, which constitute the *button-lac*; while larger ones, from an inch to two or three inches in diameter, constitute the *plate-lac* of commerce. That known as *stick-lac* is the twigs as they are gathered, but broken short for the convenience of packing. Below the lac-bearing trees there is always a considerable quantity of the resin in small particles, which have been detached by the wind shaking and chafing the branches; this also is collected, and constitutes the seed-lac of our merchants.

The water in which the stick-lac is first softened contains, as before mentioned, the coloring matter of the dead insect. This is strained and evaporated until the residue is a purple sediment, which, when sufficiently dried, is cut in small cakes, about two inches square, and stamped with certain trade-marks, indicating its quality. These are then fully dried, and packed for sale as *lac-dye*, of which large quantities are used in the production of scarlet cloth, such as that worn by some soldiers; for this purpose, lac-dye is found very suitable.

The lac insect is a native of Siam, Assam, Burmah, Bengal, and Malabar; the lacs and lac-dye come chiefly from Bombay, Pegu, and Siam. In 1877, about 100,000 cwts. of the different kinds of lac were exported to Great Britain; in 1880, only 58,000 cwts. (value £370,000). The annual consumption of lac-dye amounts to about 1,200,000 lbs.

As there is no strictly analogous resin from the vegetable kingdom, not even from the lac-bearing trees, it may be assumed that the juices of the trees are somewhat altered by the insects. The best analyses show that shell-lac contains several peculiar resins. The great value of the lacs is found in their adaptability for the manufacture of varnishes, both in consequence of their easy solubility, and also because of the fine hard coating, susceptible of high polish, which they give when dry. The well-known 'French polish' is little more than shell-lac dissolved in alcohol; and a fine thin varnish made of this material constitutes the lacquer with which brass and other metals are coated, to preserve their polish from atmospheric action.

All the varieties of lac are translucent, and some of

LAC—LACCADIVES.

the finer kinds, in flakes not much thicker than writing-paper, are quite transparent, and all, as before stated, are colored various shades of brown, from orange to liver. Nevertheless, if a quantity of shell-lac be softened by heat, it may, by continually drawing it out into lengths, and twisting it, be made not only quite white, but also opaque; in this state it has a beautiful silky lustre; and if melted and mixed with vermilion, or any other coloring matter, it forms some of the fancy kinds of sealing-wax: the more usual kinds are made by merely melting shell-lac with a little turpentine and camphor, and mixing the coloring matter. Shell-lac has the property of being less brittle after the first melting than after subsequent meltings; hence the sealing-wax manufactured in India has always had a high reputation, and hence also the extreme beauty and durability of those Chinese works of art in lac, some of which are very ancient. These are usually chow-chow boxes, tea-basins, or other small objects made in wood or metal, and covered over with a crust of lac, colored with vermilion, which, while soft, is molded into beautiful patterns. So rare and beautiful are some of these works, that even in China they cost almost fabulous prices.

LAC, or LAKH, *lāk*: in the E. Indies a sum of 100,000 rupees. A lac of *Government Rupees* is equal to £9,270 sterling; a lac of *Sicca Rupees*, which in some places are also in very general use, is equal to £9,898 sterling. One hundred lacs, or 10,000,000 of rupees, make a *Crore*.

LACANDONES, *lā-kan-dō'nās*: tribe of Central American Indians, formerly occupying a large region in n. Guatemala, now almost confined to the vicinity of the Chiche Mountains. They belong to the Maya stock, fought the Spaniards stubbornly, and though refusing permission to whites to visit their settlements are now quite peaceably inclined. They are nominally subject to Guatemala, but are independent in govt., and adhere to their ancient forms of worship.

LACCADIVES, *lāk'a-dīvz* (native name *Lakara-Divh*, i.e., the Lakara Islands): group of islands in the Arabian Sea, discovered by Vasco de Gama 1499; about 150 m. w. of the Malabar coast of the peninsula of Hindustan. They extend in n. lat. 10°—12°, and in e. long. 72°—74°, and are 17 in number; 744 sq. m. Being of coral formation, they are generally low, with deep water immediately round them, and are therefore dangerous to navigators. Chief productions, coir, jaggery, rice, cocoa and betel nuts, sweet potatoes, and cattle of a small breed. The inhabitants, who are called *Moplays*, are of Arabian origin, and in religion follow a sort of Moham-medanism. Since 1875 the islands are dependencies of Great Britain, having been then annexed to the province of Madras.—Pop. 7,000.

LACE.

LACE, n. *lās* [OF. *las*, a snare, a noose—from L. *laquēus*, a snare, a noose: It. *laccio*; F. *lacs* or *lacqs*, a lace, a tie: Prov. *lassar*; F. *lacer*, to bind]: a fine kind of network, texture, or trimming; a string or cord used for a fastening; in *old familiar language*, spirits added to tea or coffee: V. to fasten or draw together with a lace or cord, as a boot or stays; to trim with lace; in OE., to embellish. **LAC'ING**, imp.: N. a fastening with a lace or cord; the cord used in fastening. **LACED**, pp. or a. *lāst*, fastened with a lace or cord. **STRAIT-LACED**, narrow-minded; bigoted in opinion. **LACE'MAN**, one who deals in lace. **LACED MUTTON**, in OE., a bawd. **GOLD LACE**, yellow silk thread covered with flattened gold wire, or silver-wire gilt, and then woven into lace. **SILVER LACE**, thread covered with silver and woven into lace. *Note.*—*Point lace* is that made entirely by the needle and single thread: *pillow lace*, the lace made by the help of cushion and bobbins or pins.

LACE: ornamental fabric of linen, cotton, or silk thread, made either by the hands, somewhat after the manner of embroidery, or with machinery. The manufacture of L. by hand is an operation of exceeding nicety, and requires both skill and patience of no ordinary kind, and the best productions of this fabric surpass all other textile materials in costliness and beauty.

Whether the ancients had any knowledge of lace-making, excepting gold-lace (see end of this article), is not known; nor is it known with certainty when this art came into practice in Europe; but there is good reason to suppose that *point-lace*, the oldest variety known, was the work of nuns during the latter half of the 14th and the beginning of the 15th c. This point-lace is very characteristic, and is truly an art production. The artistic character of the patterns, and the wonderful patience and labor shown in carrying them out, places them, as productions by women, on a parallel with the decorative works in stone, wood, and metal of the monks. They indicate no tiresome efforts to copy natural objects, but masterly conceptions of graceful forms and tasteful combinations. The exact figures of the pattern were cut out of linen, and over these foundation-pieces, as they may be called, the actual lace-work was wrought by the needle, with thread of marvellous fineness, and with such consummate art, that the material of the foundation is quite undiscoverable under the fairy-like web which has been woven over it. These portions of the fabric were then joined together by connecting

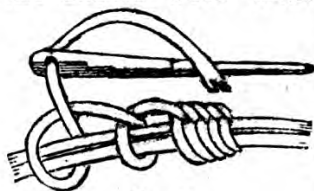


Fig. 1.

threads, each of which, like the broader parts, consists of a foundation, and lace-work covering; the former being a mere thread, often of exceedingly fine yarn; the latter being a sort of loop-work like the modern crochet (fig. 1.). The wonderful durability of point-lace is attested by the fact, that it is

LACE.

not uncommon in the most choice collections of the present, though the art is supposed to have been lost about the beginning of the 16th c., when a more easily made, and consequently cheaper style of point-lace, displaced the older and more artistic kind.

The point-lace of the second period, though always very beautiful, was deficient in solidity and in purity of design; moreover, it bears indications of having been copied from patterns, while the older kind was evidently the carrying out of artistic thoughts, as they were conceived, in the original material, the worker and the designer being the same person. It was during the second period that the pillow was first used, and it is probable that the use of patterns led to the application of the pillow. First, the L. would be worked on the pattern, to insure correctness, where the worker was merely a copyist; then it would soon become evident that if the pattern were so arranged as to avoid shifting, the facilities of working would be greatly increased; and it has been suggested that the pattern pinned to the pillow, and the threads twisted round the pins, to prevent raveling when not in use, suggested the net-work which afterward became a leading feature in the fabric.

The invention of pillow-lace has been claimed by Beckmann, in his quaint way, for one of his countrywomen. He says: 'I will venture to assert that the knitting of lace is a German invention, first known about the middle of the 16th c.; and I shall consider as true, until it be fully contradicted, the account given us that this art was found out before 1561, at St. Annaberg, by Barbara, wife of Christopher Uttmann. This woman died in the 61st year of her age, after she had seen 64 children and grandchildren; and that she was the inventress of this art is unanimously affirmed by all the annalists of Saxony.' Whether she invented, or merely introduced the art, cannot now be proved, but certain it is, that it soon became settled in Saxony, and spread thence to the Netherlands and France. Even to the present day, we occasionally hear of 'Saxon bone-lace,' a name which was given to indicate the use of bone-pins, before the introduction of the common brass ones.

It will readily be supposed that an art depending so much on individual skill and taste, would be likely to vary exceedingly; nevertheless, all the varieties resolve themselves into few well-marked groups, under three distinct classes. The first class is the *Guipure*, which comprises all the true needle-worked L., whether ancient or modern; its varieties are—*Rose-point*, in which the figures are in high relief, having a rich embossed appearance; *Venetian-point*, *Portuguese-point*, *Maltese-point*: in all of these the pattern is flatter than in the *Rose-point*, *Point d'Alençon*, and *Brussels-point*. The last two are still made, the modern *Point d'Alençon* quite equalling in beauty and value that made in the

LACE.

middle of the 17th c., when its manufacture was introduced by the celebrated Colbert, chief minister of Louis XIV. The Point d'Alençon has very distinctive characteristics. When the pattern is once designed, each portion may be worked by a separate person, and the various figures are then connected by a groundwork of threads, which are so passed from one figure to another as to represent a web of wonderful delicacy and regularity: small spots or other figures are here and there skilfully worked in where the threads cross each other; these are called *modes*, and not only add much to the strength of the fabric, but greatly increase its richness of effect. In all these varieties, but two kinds of stitches are employed, and these differ chiefly in the greater or less closeness of the threads employed. First, a series of threads are laid down all in one direction, so as to cover the pattern, and then a certain number of these are taken up and covered by loops of the cross-stitches, as in fig. 1, or are more lightly held together, as in fig. 2.



Fig. 2.

The second class is *Pillow-lace*, sometimes called Cushion or Bobbin lace, from the pillow or cushion being used to work the pattern upon, and the various threads of which the figures are made up, each being wound upon a bobbin, usually of an ornamental character, to distinguish one from the other. The pattern on parchment or paper, being attached to the *pillow* or cushion, pins are stuck in at regular intervals in the lines of the pattern, and the threads of the bobbins are

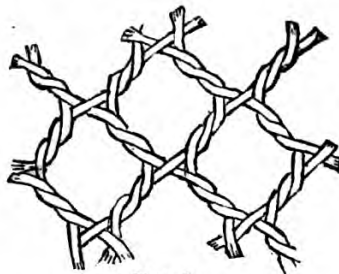


Fig. 3.

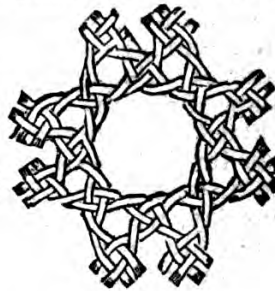


Fig. 4.

twisted or plaited round them so as to form the network arrangement which is characteristic of this class of L. (figs. 3 and 4), the patterns, or figured portions, being worked out by a crossing of threads, which, although actually plaiting, gives the effect of weaving, as in fig.

5. The varieties of this lace are—*Spanish, Grounded Spanish, Saxony Brussels, Flemish Brussels, Mechlin, Valenciennes, Dutch Lisle, Chantilly, Silk and Cotton Blonde, Limerick, Buckinghamshire, and Honiton*. The last has of late years become the most beautiful of all the varieties now made, though the Irish or Limerick also has taken a high position.



Fig. 5.

LACE.

The third class is machine-made L., which, by its wonderful improvement and rapid development, has worked a complete revolution in the lace-trade, so that the prices formerly obtained for hand-made L. can no longer be commanded, while machine L., of great beauty, has become so cheap and plentiful as to be worn by all classes. It has been mentioned before that the use of the pillow led to the introduction of net as the groundwork for L. figures, and it was to the manufacture of this so-called *bobbin-net* that the machinery was first applied (see BOBBINET). The figure in the article referred to indicates the structure of net. The lace-machine, or *frame*, as it is technically called, is very complicated, but one or two points of chief importance may show its general principles. First, then, as in the loom (see LOOM), there is a series of warp-threads, placed, however, perpendicularly instead of horizontally, and not so close as in ordinary weaving, the space between each being sufficiently wide to admit of a shilling passing edgewise between them. Behind these threads, and corresponding to the interspaces, is a row of ingeniously constructed flat bobbins or reels resting in an arrangement called a *comb-bar* or *bolt-bar*. These are so placed, that with the first movement of the machine, each bobbin, which carries its thread with it, passes through two of the parallel and perpendicular threads of the warp, and is lodged in another and similar bolt-bar in front of the warp. But this front bolt-bar, besides an advancing and receding motion, has another movement, called *shogging*—from right to left. When it receives a bobbin by its forward motion, it draws back, bringing the bobbin and thread through two of the upright threads; it then *shogs* or moves to one side, and goes forward again, taking the thread through the next two warp-threads, and lodging the bobbin on the back bolt-bar again, one distance beyond its last space; this it recovers by the next movement, and it again passes through the first space, to be again received by the front bolt-bar. By these movements, the bobbin-thread is twisted quite round one upright thread of the warp; another movement then shifts the bobbin, so that it will pass through the next pair of upright threads, and so carry on its work, the warp-threads moving at the same time, unwinding from the lower beam, and being rolled on the upper one. There being twice as many bobbins as there are threads in the warp, each bolt-bar having a set which it exchanges with the other, and all being regulated with great nicety, a width of lace is made in far less time than has been required to write this short description. The various additions to, and variations on, these operations, which apply only to bobbinet, for the production of patterns, are numerous and complicated—each pattern requiring new complications. They all depend on the variations which can be given to the movements of the flat, disk-like bobbins.

The history of the lace-machine is not clear; it is said

LACE-BARK TREE—LACÉPÈDE.

to have been invented by a *frame-work* knitter of Nottingham, from studying the L. on his wife's cap; but it has been continually receiving improvements, among which those of Heathcote, 1809—the first to work successfully—Morley, 1811 and 24, and those of Leaver and Turton, and of Clark and Marl, all 1811. The manufacture of L. by machinery is chiefly in Nottingham, whence it is sent to all parts of the world; but the statistics of its manufacture and market are not known, as only *thread-lace* is mentioned in the British official lists of exports, while the vast production of cotton-lace is mixed with the returns of calico and like fabrics.

Gold-lace and *Silver-lace*, properly speaking, are laces woven, either by the hand or by machinery, from exceedingly fine threads of the metals, or from linen, silk, or cotton threads coated with still finer threads of gold or silver; but gold or silver lace designate not only that which is rightly so-called, but also fringe made of these materials; also gold and silver embroidery, such as is seen on state robes and trappings, and on some ecclesiastical dresses, etc. Gold-lace is made in London, but considerable quantities of that used for decorating uniforms and other dresses, etc., is made in Belgium. France supplies much of the gold and silver thread used, and excels all other countries in production of some of the more artistic varieties of gold and silver L. and embroidery. Italy has lately shown great taste and skill. The works of Luigi Martini, of Milan, attained great celebrity, and were recently said to produce about \$80,000 worth per annum.

LACE-BARK TREE (*Lagetta lintearia*): tree of nat. ord. *Thymeleaceæ*, native of the W. Indies. It is a lofty tree, with ovate, entire, smooth leaves, and white flowers. It is remarkable for the tenacity of the fibers of its inner bark, and the readiness with which the inner bark may be separated, after maceration in water, into layers resembling lace. A gov. of Jamaica is said to have presented to Charles II. a cravat, frill, and ruffles made of it.

LACEDÆMON: see SPARTA.

LACE-LEAF: see LETTICE LEAF.

LACÉPÈDE, *là-sā-pād'*, BERNARD GERMAIN ÉTIENNE DE LAVILLE, Count DE: French naturalist and writer. 1756, Dec. 26—1825, Oct. 6; b. Agen; of a noble family. In the study of natural history he was encouraged by the friendship of Buffon, and was appointed curator of the Cabinet of Natural History in the Royal Gardens at Paris. At the Revolution, he became prof. of nat. his., and entering on a political career, rose to be a senator 1799, a minister of state 1809, and, after the return of the Bourbons, a peer of France, though previously a most zealous adherent of Bonaparte. He died of small-pox at his mansion of Epinay, near St. Denis. A collective ed. of his works was published 1826: among them are works on Reptiles, Fishes, and the Cetacea, a *Work on the Nat. Hist. of Man*, and one entitled *Les Ages*

LACERATE—LACHESIS.

de la Nature. His greatest work, that on Fishes (5 vols. 1798–1803) was long unrivalled in that department, though now in a great measure superseded. L., who was an accomplished musician, was the author of a work entitled *La Poétique de la Musique* (2 vols. 1785), and of two romances intended to illustrate social and moral principles. He was an amiable man, extremely kind, delighting in domestic life, and very simple, almost abstemious, in his habits.

LACERATE, v. *lās'ér-āt* [L. *lacerātus*, torn or mangled—from *lacer*, torn: It. *lacerare*; F. *lucérer*]: to wound and tear; to rend. LACERATING, imp. LACERATED, pp.: ADJ. rent; torn; appearing torn. LACERABLE, a. -*ā-bl*, capable of being lacerated or torn. LACERATION, n. -*ā-shŭn* [F.—L.]: the marks made by wounding and tearing; the act of tearing or rending. LACERATIVE, a. -*tiv*, having power to tear or rend.

LACER'TA and LACER'TIDÆ: see LIZARD.

LACERTIAN, a. *lā-sér'shĭ-ān*, or LACERTILIAN, a. *lās'ér-tĭl'ĭ-ān* [L. *lacerta*, a lizard]: pertaining to the family of lizards. LACERTINE, a. *lās'ér-tĭn*, like a lizard.

LACHAISE, *lā-shāz'*, FRANCIS D'AIX DE: 1624, Aug. 25—1709, Jan. 20; b. of a noble family, in the castle of Aix, now in the department of Loire: Jesuit and provincial of his order, whom Louis XIV. selected for his confessor on the death of Father Ferrier 1675. His position was one of great difficulty, owing to the different parties of the court, and the strife between Jansenists and Jesuits. In the most important questions of his times, Father L. avoided extreme courses. A zealous Jesuit, and of moderate abilities, he yet sustained among his contemporaries the reputation of a man of mild, simple, honorable character. Madam Maintenon could never forgive him the little zeal with which he opposed the reasons urged against the publication of her marriage with the king; but during the 34 years that he filled his office of confessor, he never lost the favor of the king. He was a man of some learning, and fond of antiquarian pursuits. Louis XIV. built him a country-house of Paris, the large garden of which was 1804 converted into a burial-place, known as the *Pere-la-Chaise*.

LACHES, n. *läch'ēz* or *lāsh'ēz* [Norm. F. *lachesse*; OF. *lasche*, slack, remiss—from mid. L. *lascus*, a transposition of L. *lacsus* or *laxus*, loose: F. *lâche*, idle, sluggish]: in law, a term meaning neglect or negligence; inexcusable delay. The courts do not charge with L. any person under legal disability, e.g., an infant. L. is not generally relieved by equity, unless where the rights of the party seeking relief were doubtful or to him unknown.

LACHESIS, n. *lāk'ē-sĭs* [Gr. the allotter]: in L. and Gr. myth., one of the three Fates, who spins the thread of life, allotting to man and things their duration in time: *Clotho* holds the distaff, and *Atropos* cuts the thread.

LACHESIS—LACHRYMAL.

LACHESIS, *lăk'ē-sīs*: genus of serpents allied to Rattlesnakes (*Crotalidæ*), but differing from rattlesnakes in having the tail terminated with a spine instead of a rattle, and in having the head covered with scales, and not with plates. All the species are natives of the warm parts of America, where some of them are among the most dreaded of venomous serpents. They are usually seen coiled up, with keen glaring eyes, watching for prey, on which they dart with the swiftness of an arrow, and then coiling themselves up again, wait quietly till the death-struggle of the victim is over. Some of them attain the length of seven feet. Unlike rattlesnakes, they are said to be apt to attack men, even when not attacked or threatened.

LA CHINE': see **CHINE**, **LA**.

LACHLAN, *lăk'lan*: river of e. Australia, rising in New South Wales, w. of the Blue Mountains. After a course of 700 m., with the characteristics of the Darling (q.v.) on a smaller scale, it joins the Murrumbidgee, which itself, a little further down, enters the Murray. The former of these two points of confluence is in lat. 34° 30' s., and long. 144° 10' e.

LACHMANN, *lăch'mân*, **KARL**: celebrated German critic and philologist: 1793, Mar. 4—1851, Mar. 13; b. Brunswick. He studied at Leipzig and Göttingen, became prof. in the Univ. of Königsberg 1816, and at Berlin 1827. L.'s literary activity was extraordinary. He was devoted equally to classical studies and to old German literature, and illustrated both by a profound and sagacious criticism. Among his most important productions are editions of the *Nibelungenlied*, of the works of Walter von der Vogelweide, Propertius, Catullus, Tibullus, and of the New Testament (Berl. 1831; 3d ed. 1846) of which a larger edition, with the Vulgate translation, appeared in 2 vols. (Berl. 1846-50). The design of the last of these works was to restore the Greek text as it existed in the Eastern Church in the 3d and 4th c.; and L. thought himself more likely to attain that end by attaching weight only to such mss. as exist in Uncials (q.v.)

LACHRYMAL, a. *lăk'rî-măl* [mid. L. *lachrymālis*, pertaining to tears—from L. *lachryma*, a tear]: pertaining to tears; generating or conveying tears. **LACH'RYMARY**, a. *-măr-î*, containing tears. **LACH'RYMA'TION**, n. *-mă'shûn*, act of shedding tears; a preternatural flow of tears. **LACH'RYMA'TORY**, n. *-mă'ter-î*, small bottle-shaped vessel anciently buried with the dead, and supposed to contain the tears shed for their loss, but whose real use probably was to hold perfumes or ointments: these little vials of glass or earthenware had long necks, and mouths shaped as if to receive the eyeball. **LACH'RYMOSE**, a. *-môs*, generating or shedding tears; tearful; sad; doleful. **LACH'RYMOSELY**, ad. *-lî*. **LACHRYMAL CANALS**, the canals which convey the tears from the eye to the nasal

LACHRYMAL ORGANS.

ducts. LACHRYMAL DUCTS, the ducts or small tubes which convey the tears from the lachrymal gland to the eye. LACHRYMAL GLAND, the gland which secretes the tears: see LACHRYMAL ORGANS, DISEASES OF THE. LACHRYMÆ CHRISTI, *lāk'rī-mē kris'tī* [*L. lachrymæ*, the tears; *Christi*, of Christ]: a muscatel wine of sweet but piquant taste, and a most agreeable bouquet; produced from the grapes of Mount Somma, near Vesuvius. There are two kinds, the white and the red, the first generally preferred. The demand being greater than the supply, large quantities of the produce of Pozzuoli, Istria, and Nola are sold under this name. A similar wine is produced in many islands of the Archipelago, as Candia, Cyprus, etc. The name is sometimes applied to any liquid supremely excellent.

LACHRYMAL ORGANS, DISEASES OF THE: arising from various causes. (For the organs themselves, see EYE).



Figure of
Style. quinine.

There may be a deficient secretion of tears (*Xerophthalmia*): this may be palliated by keeping the cornea constantly moist with glycerine by means of an eye-cup. Or there may be an over-secretion of tears, so that they run down the cheeks: this affection (termed *Epiphora*, not to be confounded with the *Stillicidium lachrymarum*, or overflow of tears that arises from an obstruction of the channels through which they pass into the nose) is common in scrofulous children, and should be treated with gentle aperients, such as rhubarb combined with bicarbonate of soda, and tonics, such as the citrate of iron and

quinine. Obstruction of the nasal duct is generally caused by a thickening of the mucous membrane that lines it, and is a common affection, especially in scrofulous young persons: There is a feeling of weakness of the eye on the affected side, and tears run down the cheek, while the nostril on that side is unnaturally dry. The lachrymal sac (see EYE, fig. 6) is distended with tears, and forms a small tumor by the side of the root of the nose. On pressing this tumor, tears and mucus can be squeezed backward through the puncta, or downward into the nose, if the closure is only partial. This affection often leads to inflammation of the sac, or to the formation of a fistulous aperture at the inner corner of the eye, communicating with the lachrymal sac, and known as *Fistula Lachrymalis*. This fistulous aperture, caused by the bursting of an abscess, arising from inflammation of the sac, is generally surrounded by fungous granulations (popularly known as *proud flesh*), and the adjacent skin is red and thickened from the irritation caused by the flow of tears. In these cases, the sac must be opened by a puncture, and a style (a silver probe about an inch long, with a head like a nail) should be pushed through the duct into the nose. The retention of this instrument causes the duct to dilate, so that the tears

LACINIA—LACLÈDE.

flow by its side. The flat head of the style lies on the cheek, and both keeps the instrument in its place and facilitates its occasional removal for the purpose of cleansing. Sometimes it is necessary that the instrument should be worn for life, but in less severe cases the duct remains permanently dilated, and a cure is effected in a few months.

LACINIA, n. *lă-sîn'î-ă*, LACINÆ, n. plu. *lă-sîn'î-ē* [L. *lacinia*, a fragment of cloth, the lappet or flap of a garment]: in *bot.*, a slash; a deep taper-pointed incision; such strips as the petals are cut up into in the plant Ragged Robin. LACINIATE, a. *lă-sîn'î-ăt*, or LACINATED, a. *lă-sîn'î-ă-tēd*, in *bot.*, irregularly cut into narrow segments; fringed; or LACINIOSE, a. *lă-sîn'î-ōs*, fringed. LACINIOLATE, a. *lă-sîn'î-ō-lăt* [dim. of *lacinia*]: having very minute laciniae. LACINULA, n. *lă-sîn'û-lă* [dim.]: the small inflexed point of the petals of Umbellifers.

LACK, n. *lăk* [Dut. *lack*, want, defect; *laecken*, to become deficient: Icel. *lacr*, defective: Swab. *lack*, slow, faint: possibly connected with LEAK]: want; deficiency; need: V. to want; to be destitute of; to be in want. LACK'ING, imp. LACKED, pp. *lăkt*. LACKALL, n. *lăk'awl*, in *familiar language*, a needy person: LACK'BRAIN, -*brăn*, a witless or stupid person.

LACK, *lăk*: another spelling of LAKH, which see.

LACKADAISY, a. *lăk'ă-dă'zî*, or LACK'ADAISICAL, a. -*zî-kăl*: affectedly pensive; sentimental.

LACK-A-DAY! int. *lăk'ă-dă'* [a contr. of ALACK-A-DAY, which see]: an expression of sorrow or regret; alas!

LACKAWANNA, *lăk-a-wŏn'a*, RIVER: small stream rising in Susquehanna co., Penn., flowing s.w. through Luzerne co., and emptying into the Susquehanna river at Pittston. For 30 m. it passes through the largest and richest anthracite coal region in the United States, known as the Lackawanna, and sometimes as the Wyoming, basin. The city of Scranton, formerly Lackawanna, is the most important place on its course.

LACKER: see LACQUER.

LACKEY, n. *lăk'î* [F. *laquais*, a footman—from OF. *laquay*—from Sp. *lacayo*, a lackey: Gael. *laoch*, a young man: OF. *naquais*, an attendant at a tennis-court]: an attending male servant; a footman: V. to attend servilely; to act as a lackey. LACK'EYING, imp. -*î-ing*. LACKEYED, *lăk'id*.

LACK-LUSTRE, a. *lăk'lŭs-tēr* [*lack*, and *lustre*]: wanting lustre or brightness; void of expression.

LACLÈDE, *lă-klăd'*, PIERRE LIQUESTE: 1724-1778, June 20; b. Bion, France: colonist. He obtained the exclusive right to trade with the American Indians on the Missouri river 1762, established with Auguste Chouteau (q.v.) the La. Fur Company, and made a permanent settlement and station on the site of St. Louis (which he named in honor of Louis XV.), 1764, Feb. 15.

LA CONDAMINE—LACORDAIRE.

LA CONDAMINE, *lâ kōng-dâ-mên'*, **CHARLES MARIE DE**: 1701, Jan. 28—1774, Feb. 4; b. Paris: geographer and mathematician. He studied at the Univ. of Paris, and entered the army 1719; but soon turned to geographical exploration and science. He was member of a commission sent by the Acad. of Science to Peru to determine the length of a degree of the meridian near the equator; and on his return he made the first scientific exploration of the Amazon river. He returned to Paris 1745, and published 1745 and 51 the results, maps, and journals of his expeditions. His account of caoutchouc led to its introduction into Europe.

LACONIC, a. *lă-kōn'ik*, or **LACONICAL**, a. *-i-kāl* [Gr. *lakonikos*; L. *laconicus*, of or belonging to Laconia, a country of Greece, whose chief city was Sparta (q.v.) and whose inhabitants were noted for sententious brevity and gravity in discourse: F. *laconique*: It. *laconico*]: short; brief; pithy; expressing much in few words. **LACONICALLY**, ad. *-kōn'i-kāl-lī*. **LACONICISM**, n. *lă-kōn'-i-sizm*, or **LACONISM**, n. *lăk'ōn-izm*, a laconic style; a concise manner of expression; a brief expression.—**SYN.** of 'laconic': sententious; pointed; concise; succinct.

LACORDAIRE, *lâ-kor-dār'*, **JEAN-BAPTISTE-HENRI**: most distinguished of the modern pulpit-orators of France: 1802, Mar. 12—1861, Nov. 22; b. Recey-sur-Ource, in the department Côte-d'or. He was educated at Dijon, where also he entered on legal studies; and having taken his degree, he began to practice as an advocate in Paris 1824, and rose rapidly to distinction. As his principles at this period were deeply tinged with unbelief, it was a matter of universal surprise in the circle of his acquaintance that he suddenly gave up his profession, entered the College of St. Sulpice, and 1827 received holy orders. His change of views had been occasioned by his reading of Lamennais's *Essai sur l'Indifférence*. He soon became distinguished as a preacher, and in the College of Juilly, to which he was attached, he formed the acquaintance of the Abbé Lamennais, with whom he speedily formed a close and intimate alliance, and in conjunction with whom, after the revolution of July, he published the well-known journal, the *Avenir*, an organ at once of the highest church principles and of the most extreme radicalism. The articles published in this journal, and the proceedings which were adopted in asserting the liberty of education, led to a prosecution in the chamber of peers 1831; and when the *Avenir* itself was condemned by Gregory XVI., L. formally submitted, and for a time withdrawing from public affairs, devoted himself to the duties of the pulpit. The brilliancy of his eloquence, and the novel and striking character of his views, excited an interest altogether unprecedented, and attracted unbounded admiration. His courses of sermons at Notre-Dame drew to that immense pile crowds such as had never

LACQUER

been seen by the living generation, and had produced an extraordinary sensation even on the non-religious world, when once again L. fixed the wonder of the public by relinquishing the career of distinction which was open to him, and entering the novitiate of the Dominican order 1840. A short time previously, he had published a memoir on the re-establishment of that order in France, which was followed, after his enrolment in the order, by a Life of its founder, St. Dominic; and 1841 he appeared once again in the pulpit of Notre-Dame, in the well-known habit of a Dominican friar. From this date, he gave much of his time to preaching in various parts of France. In the first election which succeeded the revolution of 1848, he was chosen one of the representatives of Marseille, and took part in some of the debates in the assembly; but he resigned in the following May, and withdrew entirely from political life. In 1849, 50 and 51, he resumed his courses at Notre-Dame, which, together with earlier discourses, have been collected in three vols., under the title of *Conferences de Notre-Dame de Paris*, 1835-50. His health having begun to decline, he withdrew 1854 to the convent of Soreze, where he died. In 1858, he wrote a series of *Letters to a Young Friend*, which have been much admired; and 1860, having been elected to the Acad., he delivered what may be called his last address—a Memoir of his predecessor, M. de Tocqueville. A collected ed. of his works appeared Paris 1872; his Memoirs by Montalembert 1862.

LACQUER, or LACKER, n. *lăk'ér* [F. *laque*, rose or ruby color—from It. *lacca*, lacquer: Port. *lacre*, sealing-wax (see LAC 1): varnish prepared for coating metal-work (see LAC), usually polished brass. The formula usually is—for gold color: alcohol, two gallons; powdered turmeric, one lb., macerate for a week, and then filter with a covered filter, to prevent waste from evaporation; to this add, of the lightest-colored shellac, 12 oz.; gamboge, four oz.; gum-sandarach, three and one-half lbs.: this is put in a warm place until the whole is dissolved, when one qt. of common turpentine varnish is added. A red lacquer, prepared by substituting three lbs. of annatto for the turmeric, and one lb. of dragon's blood for the gamboge, is extensively used. LACQUER, or LACKER, v. to varnish or cover with lacquer. LACQUERING, imp. *lăk'ér-ing*: N. the art of coating metal with varnish. The term has also a wider signification, and is made to apply to the process by which some varieties of goods in wood and papier mâché are also coated with layers of varnish, which are polished, and often inlaid with mother-of-pearl, etc. See PAPIER MÂCHÉ. It would appear, from the very fine specimens from Japan in the International Exhibition, that the Japanese excel in the art of producing articles of exquisite thinness and delicacy. The varnish used by the Chinese and Japanese appears to be the same, and is a natural secretion which flows from

LACROIX—LA CROSSE.

incisions in the stem of the Varnish-tree (q.v.). Usually, the oriental lacquered work is tastefully ornamented with designs painted in gold, or with inlaid shell-work. The Japanese have carried this art so far as to apply it to their delicately beautiful china, some of which is lacquered and inlaid with mother-of-pearl, forming landscapes and other designs. LACQUERED, . pp. a. *lāk'ér-d*, covered with lacquer; varnished. LACQUERER, n. *lāk'ér-ér*, one who varnishes metals. LACQUERED WARE [Dut. *lak-werk*]: ware covered with a varnish of lac.

LACROIX, *lâ-krwâ'*, or LACRAIX, SYLVESTRE-FRANÇOIS: French mathematician: 1765–1843; b. Paris; of poor parentage. He gained so great knowledge of elementary mathematics, that, at the age of 17, he obtained, by the recommendation of Monge (q.v.), the professorship of mathematics in the Naval School at Rochefort. He was successively promoted to a corresponding position in the École Normale, École Polytechnique, the Sorbonne, and the College of France; was chosen member of the Acad. of Sciences 1799, gratefully remembered for his *Traité du Calcul Différentiel et Intégral* (Paris 1797), on which he spent immense labor, in compilation of the results of all previous research, and whose value may be estimated by Laplace's statement, that it had cost him ten years' labor to supply for himself the want of such a work.

LA CROSSE, *la kraws*: city, cap. of La Crosse co., Wis.; on the Mississippi river at the mouths of the Black (n.) and La Crosse rivers (e.), and the Chicago Dubuque and Minn., Chicago Milwaukee and St. Paul, Chicago and Northwestern, and the Southern Minn. railroads; 40 m. below Winona, 130 m. s.e. of St. Paul, 152 m. above Dubuque, 196 m. w.n.w. of Milwaukee. It occupies a level prairie site, is the seat of a Rom. Cath. bp., and contains 18 churches, co. court-house (cost \$40,000) in which the U. S. courts for w. Wis. meet annually, custom-house, library, opera-house, graded public schools, three Rom. Cath. hospitals, two Rom. Cath. orphanages, two national banks (cap. \$300,000), two state banks (cap. \$300,000), and two private banks, and several daily and weekly newspapers. The manufacturing and commercial interests of L. C. comprise large shipments of lumber from the Black river region, wholesale trade with s. Minn. and w. Wis., several steam-saw and steam-flouring mills, the largest shipyard above St. Louis, tannery, linseed-oil mill, machine-shop (cost \$60,000), agricultural-implement factories, and five breweries. The city was an Indian trading-post 1841, laid out as a town 1851, and incorporated as a city 1856. Pop. (1870) 7,785; (1880) 14,505; (1885) 21,740.

LA CROSSE.

LA CROSSE, n. *la krōs'* [F. *la*, the; *crosse*, a bishop's staff or crosier]: a field game played with a ball. The Iroquois Indians have long played it in Canada. The game was introduced to England and the United States not far from 1867, in which year 18 Indians went to England to play it.

In L. C. every player is provided with a kind of large battledore. This consists of a long stick of light hickory, bent at the top like a bishop's crosier; strings of deer-skin are stretched diagonally across the hooked portion in different directions, forming a network—not so tightly as in a regular battledore or racquet-bat, nor so loosely as to form a bag. As the battledore, called the *crosse*, is five or six feet long, there is great leverage



The Crosse and Ball.

power in handling it. Only one ball is employed, made of india-rubber, and eight or nine inches in circumference. Posts or poles about six ft. high, with a small flag at the top of each, complete the equipment. The players divide themselves into two parties, the reds and the blues; their number, as well as the size of the play-field, are nearly optional, more players being needed as the area is larger. Red predominates in the dress of one party, and blue in that of the other, for facility in distinguishing colleagues from opponents. To prepare for the game, a red goal is set up at one end of the field, consisting of two small red flags on posts, about six ft. high and six ft. apart; a similar goal, blue in color, is set up at the opposite end of the field. Now, the object of the game is, for the blues to drive the ball through the red goal, and the reds to drive it through the blue goal; and each party strives to frustrate the plan of the other. The ball is not thrown by the hand, but is hooked up from the grass by the bent end of the crosse or battledore; it is borne on the netting horizontally, while the player runs, and is dexterously thrown off the crosse when the exigencies of the game require such a maneuver. No player is allowed to wear spiked shoes; but a good hold of the ground is obtained by wearing moccasins, which the Indians prefer, for the purpose, to regular shoes.

In the arrangement of the men on each side, the *goal-keeper* defends the goal; *point* is the position of the first man out from the goal; *cover-point* is a little in advance of point; *centre* is in the centre of the field; *home* is the player nearest the opponents' goal; while the *fielders* comprise the rest of the players. Beginning near the centre of the field, the players struggle to obtain a mastery over the ball, and convey it to the opponents' goal.

LACRYMATORY—LACTANTIUS FIRMIANUS.

When scooped up from the ground, it is carried horizontally on the crosse, the player running toward one of the goals, trying to elude the vigilance of his antagonists. If it seems prudent, he pitches the ball off his crosse towards a colleague, who may be in a better position to convey it toward the goal. The ball is not touched by the hand, except under special and clearly-defined circumstances. If the ball be accidentally driven through the red goal by one of the reds, the blues win the game; and *vice versâ*. The players must not strike, trip up, or grasp one another; nor must any one lay hold of the crosse of another. One player strikes the ball off an opponent's crosse with his own crosse, and not by any other means. Two players on the same side may fling or carry the ball consecutively.

Thus there is a little of football, of hockey, and of racquet in L. C. The goals resemble those of football and hockey; the occasional struggle for the ball is like the 'scrimmage' of football, though not so rough and dangerous; the general mode of play may be compared to hockey; while the battledore claims some resemblance to the racquet-bat. There is nevertheless sufficient originality in the game to render it wholly distinct.

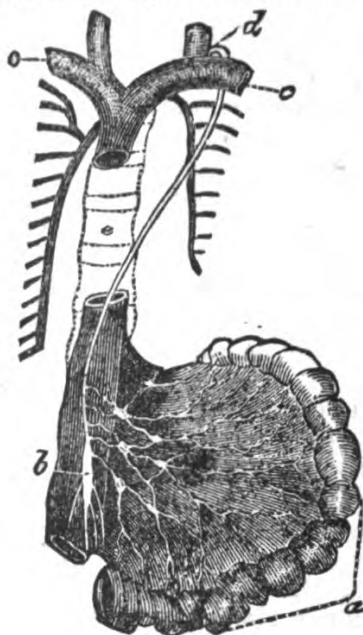
LACRYMATORY: see LACHRYMATORY.

LACS D'AMOUR, *lāk dă-môr'*, in Heraldry: cord of running knots used as an external decoration to surround the arms of widows and unmarried women, the *cordelier*, which differs slightly, being used similarly with the shields of married women.

LACTANTIUS FIRMIANUS, *lāk-tăn'shĭ-ŭs fĕr-mĭ-ă-nŭs*, or LUCIUS CÆCILIUS (or CÆLIUS) LACTANTIUS FIRMIANUS: eminent Christian author in the early part of the 4th c.; of Italian descent. He studied at Sicca, in Africa, under the rhetorician Arnobius, and in 301 settled as teacher of rhetoric in Nicomedia. He was invited to Gaul by Constantine the Great (312-318), to act as tutor to his son Crispus, and is supposed to have died at Treves about 325 or 330. L.'s principal work is his *Divinarum Institutionum*, libri vii., of polemical and apologetic character. A supposed tendency to Manichæism in his views, and his Chiliasm, have marred his reputation for orthodoxy. He attacks paganism and defends Christianity. Among his other writings are treatises *De Ira Dei* and *De Mortibus Persecutorum*. Some elegies have been erroneously ascribed to him. His style is surprisingly elegant for the late age at which he wrote, and has earned for him the title the *Christian Cicero*. As he appears not to have become a Christian till he was advanced in years, his religious opinions are often very crude and singular. L. was a great favorite during the middle ages. The *editio princeps* of this writer (Subiaco 1465) is one of the oldest extant specimens of typography.

LACTATION.

LACTATION, n. *lāk-tā'shūn* [F. *lactation*—from mid. L. *lactationem*; L. *lactatus*, filled with milk, having ability to give suck; *lactēus*, milky, containing milk—from *lac*, milk]: the time of suckling; the act of giving milk. **LACTATE**, a. *lāk'tāt*, a salt of lactic acid with a base. **LACTARENE**, n. *lāk'tā-rēn*, a preparation of the curds of milk, used by calico printers. **LAC'TEAL**, a. *-tē-āl*, pertaining to milk; conveying milk: N. in *animals*, one of the small tubes which convey the chyle from the intestines to the thoracic ducts; a lymphatic vessel. The lacteals, or *Chyliferous vessels*, were discovered, 1622, by Aselli (q.v.), and received their name from conveying the milk-like product of digestion, the Chyle (q.v.), during the digestive process, to the thoracic duct



The Lacteals:

a, a portion of small intestine connected by the membranous structure, termed the mesentery, with the spinal column (the white lines seen in the mesentery are the lacteals, and the white patches are the mesenteric glands); *b*, the receptaculum forming the commencement of the thoracic duct, which enters the circulating system at the junction of *c*, the subclavian, and *d*, the jugular vein, on the right side; *e*, the vertebral column. The large vessel, with a portion removed, lying in front of the vertebral column, is the ascending or inferior vena cava.

(q.v.), by which it is transmitted to the blood. These vessels commence (see **DIGESTION**) in the intestinal villi, and passing between the layers of the mesentery (q.v.), enter the mesenteric glands, and finally unite to form two or three large trunks, which terminate in the thoracic duct: see **LYMPHATICS**. **LACTESCENT**, a. *lāk-tēs'ēnt* [L. *lactescens*, or *lactescen'tem*, being changed into milk]: producing milk; milky. **LACTES'CENCE**, n. *-ēsns*, milkiness, or milky color; a state resembling milk. **LAC'TIC**, a. *-tik* [L. *lac*, or *lactem*, milk]: pertaining to milk; of or

LACTIC ACID.

from milk or whey, as *lactic acid* (see below). LACTIFEROUS, a. -tîf'ér-ûs [L. *fero*, I bear or produce]: bearing or producing milk or milky juice. LACTINE, or LACTIN, n. -tîn, or LACTOSE, n. lâk-tôs', sugar of milk—a sweetish substance existing in milk: see SUGAR (*Milk Sugar*).

LACTIC ACID ($C_3H_5O_3$): in its pure state, a transparent, colorless, or slightly yellow uncrystallizable, syrupy liquid, of specific gravity 1.215. It is devoid of odor, has a sharp, acid taste, and is soluble in all proportions in water, alcohol, and ether.

The best method of obtaining this acid is by dissolving 8 parts of cane-sugar in about 50 parts of water, and then adding 1 part of decaying cheese, and 3 parts of chalk. If this mixture be set aside for two or three weeks at a temperature of about 80° , it becomes filled with a mass of crystals of lactate of lime, which must be purified by re-crystallization, and treated with about one-third their weight of sulphuric acid. The residue must be digested in alcohol, which leaves the sulphate of lime, and dissolves the L. A., which may be obtained pure on evaporating the solution. For the mode in which L. A. is produced in this process, see LACTIC FERMENTATION.

L. A. is formed in many other ways; thus, it is a frequent product of the acidification of vegetable substances, e.g. in *sauer-kraut*, in malt vinegar, and in the acid fermentation during the manufacture of wheat-starch. It occurs ready formed in certain plants, and is very largely produced in the animal body. It is found either free or combined, or both, in the gastric juice (though not constantly), in the contents of the small and large intestine, in the chyle (after the use of amylaceous food), in the muscular juice (both of the voluntary and involuntary muscles), in the parenchymatous juices of the spleen, liver, thymus, pancreas, lungs, and brain, and is found as lactate of lime in the urine of the horse. It has been found in certain morbid conditions of the system in the milk, where it is formed from sugar by the fermenting action of the caseine; in the blood in leucocythæmia, pyæmia, and puerperal fever; in purulent and other transudations; in the urine when there is disturbance of the digestive and respiratory organs, and in rickets and softening of the bones (and almost always after exposure to the air for some time); in the saliva in diabetes; in the sweat in puerperal fever, and in the scales that form upon the skin in lepra.

The L. A. occurring in the system may be traced to two distinct sources: that in the intestinal canal is merely the product of the decomposition of the starchy matters of the food; but that which exists in the gastric juice (even when only animal food has been taken), in the muscular juice, and in the juices of the various glands, can be regarded only as a product of the regressive metamorphosis or disintegration of the tissues, and how it is formed is not accurately known.

LACTIC FERMENTATION—LACTUCARIUM.

There is no ready test for this acid. The best course is to obtain it, if it is present, as a lactate of lime, which crystallizes in beautiful tufts of acicular prisms, or as a lactate of zinc, which crystallizes in a very characteristic form in crusts consisting of delicate four-sided prisms.

LACTIC FERMENTATION: fermentation producing lactic acid (q.v.). Although lactose or sugar-of-milk may, under certain conditions, be made to undergo alcoholic fermentation (as in the preparation of kumiss by the Tartars from mares' milk), it generally yields a very different product, viz., lactic acid, as may be seen in the case of milk turning sour in warm weather. The caseine has usually been considered to act as the ferment, but being insoluble in acids, it is thrown down in flakes as soon as the milk becomes sour. In this insoluble form, it exerts little action in converting the lactose ($C_6H_{12}O_6$) into lactic acid ($C_3H_6O_3$); but if the acid be neutralized by carbonate of soda or by chalk, the curd is redissolved, and the transformation of the sugar into lactic acid is renewed. No evolution of gas or absorption of oxygen takes place during the conversion of the sugar into the acid.

Not only sugar-of-milk, but cane-sugar, starch, dextrine, and gum pass readily into lactic acid under the influence of caseine or other animal matters undergoing decomposition.

Pasteur considers that a specific ferment, the germs of which exist in the atmosphere, is concerned in the production of the lactic fermentation. During the process recommended in the preceding article for the preparation of lactic acid, a layer of particles of a gray color is observed on the surface of the sediment. This substance, examined under the microscope, is seen to consist of little globules or very short articulations, constituting irregular flocculent particles much smaller than those of beer-yeast, and exhibiting a rapid gyratory motion. When washed with a large quantity of water, and then diffused through a solution of sugar, the formation of lactic acid at once commences. Hence it follows that these organic particles, and not the caseine, are the actual agents in the conversion that takes place.

LACTOMETER, n. *lăk-tôm'č-tér* [L. *lac*, milk, *lactis*, of milk; Gr. *metron*, a measure]: an instrument for ascertaining the quality of milk: see GALACTOMETER.

LACTOSCOPE, n. *lăk'to-skōp* [L. *lactis*, milk; *skopeo*, I see, I observe]: instrument for assisting in determining the quality of milk by ascertaining its relative opacity.

LACTUCARIUM, n. *lăk'tū-kă'rĭ-ŭm*, called sometimes LETTUCE OPIUM [L. *lactuca*, a lettuce—from *lac*, milk]: the thickened milky juice of the common lettuce, and of several species of *Lactuca*, or Lettuce, obtained by incision of the stem. By drying in the air the juice loses about half its weight of water, the residue being L. It usually occurs in commerce in

LACUNA—LADAKH.

small lumps about the size of a pea or small bean; they are of reddish-brown color, but are sometimes covered with a grayish efflorescence; and they have a bitter taste, and a smell resembling opium. *L.* has been frequently analyzed, but chemistry has thrown little light on its composition.

L. has anodyne and sedative properties, and is employed where opium is considered objectionable; as, for instance, when there is morbid excitement of the vascular system; and it is of service in allaying cough in phthisis and other pulmonary diseases. The usual dose is five grains, but it may be safely given in larger doses. LACTU'CIC, a. -tū'sīk, denoting an acid obtained from the strong-scented lettuce. LACTU'CINE, n. -sīn, the active principle of the wild lettuce.

LACUNA, n. lă-kū'nă, LACU'NÆ, n. plu. -nē [*L. lacuna*, a hollow: *F. lacune*, a gap]: a blank space; one of the hollows or pits on the upper surface of lichens, called the *thallus* or *frond*; a large opening or blank space in the midst of a group of cells; in *anat.*, minute recesses or cavities in bone. LACU'NAL, a. -nāl, pertaining to small pits or depressions; having a blank space. LACU'NAR, n. -nēr, a kind of arched ceiling, divided into compartments sunk or hollowed: also a panel or coffer in a ceiling or in the soffit of a classic cornice. Lacunars, or Lacunaris, are much used in the ceilings of porticoes and similar classic structures, and frequently ornamented with pateræ: ADJ. pertaining to or arising from lacunæ. LACU'NARY, a. -nēr-ī, having lacunæ or blank spaces. LACU'NOSE, a. -nōs, or LACU'NOUS, a. -nūs, furrowed or pitted; containing cavities.

LACUSTRAL, a. lă-kūs'trāl, or LACUS'TRINE, a. -trīn [*L. lacus*, a lake: *It. laco*]: of or relating to swamps or lakes; living in or on the margins of lakes. LACUSTRIANS, n. dwellers on or near lakes. LACUSTRINE DEPOSITS, in *geol.*, the deposits which have been accumulated in fresh-water areas. LACUSTRINE HABITATIONS, or LACUSTRIAN VILLAGES, or LAKE DWELLINGS: see CRANNOGS.

LAD, n. lăd [OE. *laddes*, a man of inferior station: *W. lodes*, a lass; *Uwd.*, a lad: mid. *L. leudis*, a vassal: Gael. *laidir*, strong, stout; *laoch*, a lad]: a well-grown boy; a youth. LADDIE, n. lăd'dī, in *Scot.*, a little lad.

LADAKH, lă-dâk', otherwise known as MIDDLE TIBET: a province of Cashmere which is under a Maharajah, and is a British feudatory; capital, Le (q.v.): it is between Great Tibet on the e., and Little Tibet on the w., n. lat. 32° to 36°, and e. long. 76° to 79°. On the s., it is separated from Cashmere by the Himalaya, while on the n., it is divided by the Karakorum Mountains from Chinese Turkestan; about 30,000 sq. m. The country was conquered 1835, by Gholab Singh, ruler of Cashmere. It lies chiefly within the basin of the Upper Indus, being little else than a mass of mountains with

LADANUM—LADE.

narrow valleys between. Notwithstanding its great elevation, equally unfavorable to soil and climate, the temperature is sometimes singularly high—a phenomenon attributed partly to the thinness of the atmosphere, and partly to the absence of moisture. Moderately good crops of wheat, barley, and buckwheat are raised; while the mineral products are sulphur, iron, lead, copper, and gold. The transit-trade is extensive, being carried on mostly by mules and sheep. The inhabitants are very peaceful and industrious; they are excellent farmers, and their woolen manufactures are said to be important. The women are fresh and fair, but lax in their morals; among the lower classes polyandry is common. The population is essentially Mongolian, but has intermixed with the Cashmerians. The language is Tibetan, and in the opinion of Klaproth the primitive dialect of the aboriginal people inhabiting the region between Hindustan and Tartary. The religion is Lamaism, a form of Buddhism (q.v.). Pop. abt. 125,000.

LADANUM, n. *lā'dā-nūm* [L. *lādānūm*; Gr. *lēdānum*, a resinous substance exuding from the shrub *lada*]: a resinous juice of an agreeable odor which exudes from shrubs of the *Cistus* (q.v.) kind, or rock-rose, found growing in the island of Candia and Syria, used chiefly for making plasters; also spelled LABDANUM, *lāb'dā-nūm*.

LADD, GEORGE TRUMBULL, D.D.: educator: b. Painesville, O., 1842, Jan. 19. He graduated at Western Reserve College 1864 and Andover Theol. Seminary 1869; was pastor of the Spring Street Congl. Church, Milwaukee, 1871–79; prof. of intellectual and moral philosophy at Bowdoin College 1879–81, and since 1881 has occupied the corresponding chair in Yale Univ. His published works include *Principles of Church Polity* (New York 1882); *Doctrine of Sacred Scripture* (1883); *Elements of Physiological Psychology* (1887); and a translation of Lotze's *Philosophical Outlines*, 6 vols. (1884–7). He received the degree D.D. from Western Reserve College 1880. His work on the Sacred Scripture is a book of vigorous and profound reasoning, and has occasioned much debate.

LADDER, n. *lād'dér* [AS. *hlædre*; Ger. *leiter*; Pol. *letra*, a ladder: Dut. *ladder*, the rack or rails of a cart; *laede*, the comb or reed of a weaver: W. *llethr*, the slope of a hill]: a set of cross-bars; a long frame consisting of two strong sides with fixed cross-pieces serving for steps; anything by which one ascends or rises.

LADE, n. *lād* [AS. *lad*; Dut. *leyde*, a canal, a conduit—from AS. *lædan*; Dut. *leyden*, to lead]: a passage for water; the mouth of a river; a drain. MILL-LADE, the cut or canal which brings the current to the water-wheel of a mill; a mill-race.

LADE—LADINO.

LADE, v. *lād* [AS. *hladan*, to heap together, to lade out: connected with LADE 3, which see]: to throw a liquid out of a vessel by repeatedly dipping in it a receptacle of a smaller size, and then dropping the contents outside; to draw out water; to drain; in *OE.*, to let in water; to leak.

LADE, v. *lād* [AS. *hladan*; Ger. *laden*, to load; Icel. *hlada*, to lay in regular order, to pile up; *hlad*, anything piled up or laid in order: connected with LADE 2]: to put on or in, as a burden; to load or freight. **LA'DING**, imp.: N. a load or cargo; a weight. **LA'DED**, pt. **LADED**, pp. *lā'dēd*, or **LADEN**, pp. *lā'dn*, oppressed; burdened. **LADAMAN**, n. *lād'mān*, in *Scot.*, a man employed by a miller to return the loads of meal to the owners of the corn sent to be ground; a man having the charge of a pack-horse. **BILL OF LADING**, certified document or invoice, from the master of the ship, of certain goods received on board for transport, and which are to be delivered only to the consignee or producer of the invoice: see **BILL OF LADING**.

LADIES OF THE BEDCHAMBER: see **LADIES OF THE QUEEN'S HOUSEHOLD**.

LADIES OF THE QUEEN'S HOUSEHOLD: honorable personal attendants of the Queen of England. They consist of the Mistress of the Robes, the Ladies of the Bedchamber, the Bedchamber Women, and the Maids of Honor.

The office of Mistress of the Robes is of considerable antiquity. It is her duty to regulate the rotation and times of attendance of the rest of the Ladies of the Household, who all are subordinate to her. She has the superintendence of all duties connected with the bedchamber—within which the lord chamberlain has no authority—and the custody of the robes. On state occasions, she must see that the ceremony of robing the queen is properly performed. In public ceremonials, she accompanies the queen in the same carriage, or walks immediately before her majesty. The *Ladies of the Bedchamber*, who now number eight, with five extra ladies, and the *Bedchamber Women*, of whom there are eight, besides one resident and three extra, are personal attendants, ministering to the state of her majesty. The *Maids of Honor*, of whom there are eight, are immediate attendants on the royal person, and in rotation perform the duty of accompanying the queen on all occasions. They enjoy by courtesy the title 'Honorable,' when not entitled to it by birth, and are then designated the 'Honorable Miss ——' without the Christian name.

LADINO, *lā-dē'nō*: common name of the mestizo or half-breed descendants of whites and Indians in Central America, especially Nicaragua and Guatemala. The white element predominates in the males, the Indian in the females. Male Ladinos resemble the Europeans in form and feature, and have yellowish-orange tinged

LADISLAS—LADOGA

skin; the females are considered the most beautiful women in all Central America. Both sexes have struggled for many years to be recognized as the equals in all respects of the wealthiest whites, and neither will engage in manual labor.

LADISLAS, or LADISLAUS, *lăd'is-lawss*, or VLADISLAS, or VLADISLAF, or ULADISLAS: different forms of a name frequent in the histories of Poland, Hungary, Bohemia, and Servia.

LADISLAS I., King of Poland, surnamed Lokietek (the Short): ruler of the small province of Cracow, when Poland was subdivided into countless small independencies. L. united them 1319; and for greater stability of the government, he reduced the privileges of the higher nobles, removed the council of prelates and magnates, replacing it by a popular assembly; he greatly improved the administration of justice, and furthered commerce and industry.

LADISLAS II., and LADISLAS III: see JAGELLONS.

LADISLAS IV., King of Poland: (reigned 1632-48). While yet a youth, he was elected Czar of Russia 1610, but was prevented by his father, Sigismund, from accepting the crown. He was a wise and politic prince, yet it was under his reign that Sweden, Russia, and Turkey commenced to nibble at the outlying provinces of Poland. He strove manfully to remedy the peculiar defects of the Polish constitution, but they were too deeply rooted; and though he sought to end the oppression of the dissidents, and took the part of the Cossacks against those nobles who had deprived them of their rights, so weak was the royal authority, that his support availed them nothing. The Cossacks, maddened by deprivation of their liberties, the imposition of new taxes, and the persecuting zeal of the Rom. Cath. clergy, rose in rebellion, annihilated the Polish army, and put themselves under the rule of Russia. At this critical moment, L. died.

LADLE, n. *lă'dl* [from LADE 2]: a large spoon used for lading or lifting out a liquid from a vessel; the receptacle of a mill-wheel that receives the water which turns it; an instrument for drawing charges from a cannon: V. to lift or serve out with a ladle. LADLING, imp. *lă'dling*. LADLED, pp. *lă'dld*. LADLEFUL, n. *lă'dl-fûl*, the quantity held by a ladle.

LADOGA, *lă'dô-ga*, LAKE: largest lake of Europe, in the n.w. of Russia, between Finland and the govts. of Olonetz and Petersburg. It is 120 m. in length, 70 m. in breadth; 6,804 sq. m. in area. It receives the waters of Lake Onega, Lake Saim, and Lake Ilmen; and its own waters are carried off to the Gulf of Finland by the Neva (q.v.). The depth of Lake L. varies from 12 to 1,200 ft., and the navigation is exceedingly dangerous, owing to the shallows, sand-banks, and sunken rocks in

LADOGA—LADRONES.

which it abounds, and to the gusty winds occasioned by its steep and rocky banks. Of the several islands of the lake, the principal are the Valaam and Konevets, with monasteries, which attract numbers of pilgrims. Of the 70 rivers which fall into Lake L., the principal are the Wolkhof, the Sias, and the Svir, each of which is a means of communication between the Neva and the Volga. In order to obviate the difficulty of navigation, canals have been constructed along its s. and s.e. shores, the principal being the Ladoga canal (70 feet wide) which unites the mouth of the Wolkhof with the Neva. Other two canals unite the mouths of the Sias and Svir with the Ladoga canal. This canal-system forms a thoroughfare for a very extensive traffic between the Volga and the Baltic. There is also communication by water between Lake L. and the White Sea and the Caspian.

LADOGA (STARAIÄ, or OLD LADOGA): ancient Russian town, govt. of St. Petersburg, on the left bank of the river Wolkhof. It was the residence (862) of Rurik, founder of the Russian monarchy; and the walls of a fortress erected by him, and a church of the 11th c. still mark its site. Previously to the accession of Peter I., Old Ladoga was an important strategic point for the defense of Novgorod. Peter I. built the town of Novo, or New Ladoga, near the entrance of the Wolkhof into Lake Ladoga, and now on the site of the old town of Rurik stands the small village of Ouspenskoe.

LADRONES, *la-drōnz'* or *lād-rōnz'*, or MARIANA ISLANDS, *mā-rē-ā'nā*: group of about 20 islands, the northmost Australasian group; lat. $13\frac{1}{2}^{\circ}$ — $20\frac{1}{2}^{\circ}$ n., and long. 145° — $147\frac{1}{2}^{\circ}$ e. They are disposed in a row almost due n. and s.; united area 1,254 sq. m. They were discovered by Magellan 1521, who gave them their name from the thievish propensity of the natives. They were afterward called the *Lazarus Islands*; and the Jesuit missionaries, who settled here 1667, called them the *Mariana Islands*. They are mountainous, well watered, and wooded (among the trees are bread-fruit, banana, coconut), fruitful in rice, maize, cotton, and indigo. European domestic animals are now very common. When discovered, the population was reckoned at 100,000, but the present population is only about 5,500. The inhabitants, who are docile, religious, kind, and hospitable, resemble in physiognomy those of the Philippine Islands. The islands are very important to the Spaniards, in a commercial point of view. The largest island is Guajan, 90 m. in circumference; on it is the capital, San Ignacio de Agaña, seat of the Spanish governor.

LADY.

LADY, n. *lā'dī* [AS. *hlæfdige*, a mistress, a lady—probably from *hlāf*, a loaf, bread; *dægee*, a kneader—*lit.*, a maker of bread]: a woman of distinction or rank, correlative to *Lord* (q.v.); in common parlance used more extensively as correlative to *gentleman*; wife of a titled gentleman; title of the daughters of peers of the first three grades; familiar term applied to the mistress or female head of a house of the better class; a woman in any station of life who is possessed of refined manners and kindness of heart; a term of courtesy applied to any respectable woman. As a title, it belongs to peeresses, the wives of peers, and of peers by courtesy, the word *L.* being in all these cases prefixed to the peerage title. The daughters of dukes, marquises, and earls are by courtesy designated by the title *L.* prefixed to their Christian name and surname; a title not lost by marriage with a commoner, when the lady only substitutes her husband's surname for her own, and retains her precedence. But a peer's daughter marrying a peer, can no longer be designated by her Christian name with *Lady*; she must take her husband's rank and title, even should a loss of precedence be the result, as when the daughter of a duke marries an earl, viscount, or baron. Should her husband, however, be merely a courtesy peer, she may retain her designation by Christian name with *Lady* prefixed, substituting her husband's courtesy title for her surname; this title and precedence being again dropped on her husband's succession to the peerage by his father's death. The daughter-in-law of a duke, marquis, or earl, is generally designated by the title *Lady* prefixed to the Christian name and surname of her husband; but if she be the daughter of a peer of a higher rank than her father-in-law, she may, if she pleases, be designed by *Lady* prefixed to her *own* Christian name and her husband's surname, and in that case she retains the precedence which she had when unmarried. The wife of a baronet or knight is generally designed by *Lady* prefixed to her husband's surname; the proper legal designation, however, being *Dame*, followed by her Christian name and surname. LA'DYBIRD, or



Ladybird (*Coccinella ocellata*): Magnified.

LA'DYBUG [named after *Our Lady*, i.e. the Virgin Mary], (*Coccinella*): genus of coleopterous insects of the section *Trimera*, containing a great number of species very similar to each other. They are very pretty little beetles, generally of brilliant red or yellow color, with black, red, white, or yellow spots, the number and distribution of which is one of the characteristic marks of the different species. The form is nearly hemispherical, the under-surface being very flat, the thorax and head small: the antennæ are short, and terminate in a tri-

LADY.

angular club; the legs are short. When handled, these insects emit from their joints a yellowish fluid, having a disagreeable smell. They and their larvæ feed chiefly on aphides, in devouring which they are very useful to hop-growers and other agriculturists. They deposit their eggs under the leaves of plants, on which the larvæ are to find their food, and the larvæ run about in pursuit of aphides. Ladybirds are sometimes seen in immense numbers, regarded by the ignorant with superstitious dread. The German name is *Marienkäfer*. LADYLIKE, a. elegant in appearance; becoming or proper to a lady; well-bred. LADYSHIP, n. the title of a lady whose husband is not of a lower rank than a knight. LADY CHAPEL, a chapel dedicated to the Virgin ('Our Lady'), frequently added, in cathedrals and large churches, to the eastward of the high altar: Henry VII.'s chapel at Westminster is the Lady Chapel of that establishment. LADY-DAY, day of the annunciation of the Virgin Mary, Mar. 25; one of the festivals of the church; one of the regular quarter-days in England and Ireland, on which rent is generally payable. LADY-FERN (*Athyrium filix fœmina*, or *Asplenium filix fœmina*), beautiful fern,



Frond of the Lady Fern (*Athyrium filix fœmina*).

growing in moist woods, with bipinnate fronds sometimes two ft. long. The whole plant has an extremely graceful appearance. It is said to possess the same anthelmintic properties as the male fern. LADY-LOVE, a sweetheart. LADY'S-MAID, the female personal attendant of a woman of wealth or rank. OUR LADY, the Virgin Mary. LADY'S-BEDSTRAW, a small yellow-flowering plant, common by road and ditch sides; the *Galium verum*, used for curdling milk, and *G. cruciatum*, cross-wort, ord. *Galiacæ*. LADY'S FRIEND, an officer of the house of commons, who used to take care that a provision was inserted in favor of a wife when the husband applied for an act of parliament to divorce her. The practice is now superseded by the different practice in an ordinary suit in the divorce court. LADY'S GOWN, present formerly made in Scotland by a purchaser of an estate to a wife on her renouncing her liferent over her husband's lands. LADY'S MANTLE (*Alchemilla*), genus of herbaceous plants, natives chiefly of temperate and cold climates, of nat. ord. *Rosacæ*, sub-order *Sanguisorbeæ*; having small and numerous flowers, an 8-cleft calyx, no corolla, and the fruit surrounded by the persistent calyx. The name *L. M.* signifying *Mantle of Our Lady*—i.e., of the Virgin Mary, is derived from the

LADY OF MONTESA.

form of the leaves.—The COMMON L. M. (*A. vulgaris*) is abundant on banks and in pastures throughout Britain. Its root-leaves are large, plaited, many-lobed, and serrated; its flowers in corymbose terminal clusters are usually yellowish-green.—Still more beautiful is the ALPINE L. M. (*A. alpina*), which grows on mountains in Scotland, and has digitate serrated leaves, white and satiny beneath.—A plant of very humble growth and unpretending appearance is the FIELD L. M., or PARSLEY PIERT (*A.*—or *Aphanes*—*arvensis*), found in pastures, an astringent and diuretic, said to be sometimes useful in cases of stone in the bladder, by producing a large secretion of lithic acid. LADY'S SLIPPER (*Cypripedium*), genus of plants of nat. ord. *Orchideæ*, of which one species, *C. Calceolus*, is reckoned among the most beautiful orchids. The genus is remarkable for the large inflated lip of the corolla. Several very beautiful species are natives of the colder parts of N. America.

LADY HUNTINGDON'S CONNECTION, or CALVINISTIC METHODISTS: see HUNTINGDON, SELINA, Countess.

LADY OF MERCY, OUR: Spanish order of knighthood, founded 1218, by James I. of Aragon, in fulfilment of a vow to the Virgin during his captivity in France. The object for which the order was instituted was the redemption of Christian captives from among the Moors, each knight at his inauguration vowing that, if necessary for their ransom, he would remain himself a captive in their stead. Within the first six years of the existence of the order, no fewer than 400 captives are said to have been ransomed by its means. On the expulsion of the Moors from Spain, the labors of the knights were transferred to Africa. Their badge is a shield party per fess gules and or, in chief a cross pattée argent, in base four pallets gules for Aragon, the shield crowned with a ducal coronet. The order was extended to ladies 1261.

LADY OF MONTESA, *mön-tā'sâ*, OUR: order of knighthood, founded 1317 by James II. of Aragon, who, on the abrogation of the order of the Templars, urged Pope Clement V. to allow him to employ all their estates within his territory in founding a new knightly order for the protection of the Christians against the Moors. His request was acceded to by the next succeeding pope, John XXII., who granted him for this purpose all the estates of the Templars and of the Knights of St. John situated in Valencia. Out of these was founded the new order, which King James named after the town and castle of Montesa, which he assigned as its headquarters. The order is now conferred merely as a mark of royal favor, though the provisions of its statutes are still nominally observed on new creations. The badge is a red cross edged with gold, the costume a long white woolen mantle, decorated with a cross on the left breast, and tied with very long white cords.

LÆLAPS—LÆVULOSE.

LÆLAPS, *lě'laps*, or **DRYPTOSAURUS**, *drip-to-saw'rūs*: extinct genus of deinosaurian reptiles, probably about 25 ft. long (with the tail), and when standing on the long hind legs, 12 ft. in height; American representative of *Megalosaurus* (q.v.).

LÆMODIPODA, n. plu. *lě'mō-dīp'ō-dă* [Gr. *laimos*, the throat; *dis*, twice; *podēs*, feet]: an order of crustacea, so named from having two feet placed so far forward as to be, as it were, under the throat.

LAENNEC, *lâ-něk'*, **RENÉ THEODORE HYACINTHE**, M.D.: 1781, Feb. 17—1826, Aug. 13; b. Quimper, Lower Brittany: distinguished physician. He studied medicine in Paris, where he attended the practice of Corvisart. In 1814 he became chief editor of the *Journal de Médecine*. In 1816, he was appointed chief physician to the Hôpital Necker, where he soon made the discovery of mediate auscultation, or, in other words, of the use of the Stethoscope (q.v.). In 1819, he published *Traité de l'Auscultation Médiate*, which has undoubtedly produced a greater effect, so far as the advance of *diagnosis* is concerned, than any other single book. His treatise had not long appeared, when indications of consumption were discovered in his own chest by means of the art of his own creation, and after a few years of delicate health, he retired to die in his native province.

LÆ'SA MAJESTAS, or **LEZE MAJESTY**: High Treason, an offense against sovereign power. As transferred from Roman to civil law, it denoted an offense against the person or office of the king: see **TREASON**.

LÆTARE SUNDAY, *lě-tă'rě*, called also **MID-LENT**: the fourth Sunday in Lent; named from the first word of the Introit of the mass, from Is. lxvi. 10. From this name the characteristic of the services of the day is joyousness, and the music of the organ, which throughout the rest of Lent is suspended, is on this day resumed. Lætare Sunday is the day selected by the pope for the blessing of the **GOLDEN ROSE** (q.v.).

LÆVIGATOUS, a. *lě'vī-gă'tūs* [L. *lævigātus*, made smooth—from *levis*, smooth]: in *bot.*, having a smooth polished appearance.

LÆVO, prefix, *lěv-ō* [L]: the left.

LÆVOGYROUS, a. *lě-vō'jī-rūs* [L. *lævus*, the left, *lævo*, on the left; *gyrus*, a circle]: turning the plane of polarized light toward the left. **LÆVO'GYRA'TION**, n. *-vō'jī-ră'shūn*, polarization to the left hand.

LÆVULOSE, n. *lě'vū-lōs* [L. *lævus*, on the left side, as opposed to *dexter* (see **DEXTRINE**)]: fruit-sugar which is found associated with other kinds of sugar in treacle, honey, and ripe fruit—so named as causing left-handed rotation of polarized light.

LA FARGE—LA FARINA.

LA FARGE, *la fârj'*, JOHN: artist: b. New York, 1835, Mar. 31. He studied painting with William H. Hunt, began his art career as a draughtsman on wood, and has since attained wide repute as a painter of flowers and landscapes, decorator of church interiors, and mural painter of biblical subjects. He is a member of the National Acad. of Design and of the Soc. of American Artists. The most noted of his works are the interior decoration of Trinity Church, Boston; the chancel of St. Thomas's Church, New York; the *Adoration of the Wise Men* in the Church of the Incarnation, New York; *The Ascension* in the Church of the Ascension, New York; the chancel of Trinity Church, Buffalo; the *Battle Window* in colored glass in the Harvard Univ. Memorial Hall; and the Ames memorial window, Easton, Mass. Among his paintings are *New England Pasture-Land*; *View over Newport*; *A Gray Day*; *A Snowy Day*; *The Triumph of Love*; *The Last Valley*; *St. Paul*; *The Wolf-Charmer*; and *The Sleeping Beauty*.

LA FARINA, *lâfâ-rê'nâ*, GIUSEPPE: Italian author and politician; 1815-63; b. Messina. In the Univ. of Catania, the degree doctor of laws was conferred on him at the age of 19; and in 1837, having taken part in an ineffectual revolutionary movement in Sicily, he sought safety in expatriation. In 1839, he returned to Sicily, was received as a lawyer, and started several political journals—all successively suppressed. In the rising of 1848, he was elected deputy to the Sicilian parliament, appointed commissioner to the courts of Rome, Turin, and Florence, and Aug. became minister of war and of the marine. On the failure of the liberal cause he went to Paris, where he kept up relations with the Italian patriots till 1853, and then established himself in Turin. He labored hard to promote the organization of a united constitutional monarchy under the house of Savoy, and co-operated with Cavour in the war 1859 and with Garibaldi in organizing volunteer troops. In 1860 he was elected by 6 districts a deputy to the Italian parliament. His best-known historical work is *La Storia d'Italia*.

LAFAYETTE.

LAFAYETTE, *lâ-fâ-ët'*: city, cap. of Tippecanoe co., Ind.; on the Wabash river, the Wabash and Erie canal, and the Toledo Wabash and Western, the Louisville New Albany and Chicago, the Cincinnati Indianapolis St. Louis and Chicago, and the New York Lake Erie and Western railroads; 63 m. n.w. of Indianapolis, 130 m. s.s.e. of Chicago. It is built on ground rising gradually from the river to a considerable height beyond the city, is lighted with gas and electricity; has thorough natural drainage, good water supply, paid fire dept., fire alarm telegraph, and street railroad service; and contains a co. court house (cost \$250,000), opera house, 12 public school buildings, Rom. Cath. acad., hospital, monastery, convent, and orphanage, several denominational academies, a public square containing an artesian well of curative sulphur water, and a public library. Greenbush and Springvale cemeteries are just beyond the n. and n.e. limits; the co. agricultural fair grounds immediately s.; and the famous Tippecanoe battle-field, where Gen. Harrison defeated the Indians 1811, Nov. 7, 7 m. n. The industries comprise foundries and machine-shops, ornamental iron-works, marble works, flour and woolen mills, breweries, pump and agricultural implement factories, large pork-packing establishments, and the most extensive car shops in the state. There are 25 churches, divided denominationally, Meth. Episc. 6, Bapt. 3, Presb. 3, Rom. Cath. 3, Prot. Episc. 2, Lutheran 2, Ref'd 2, Christian 1, Hebrew 1, United Breth. 1, Univ. 1; 4 national banks (cap. \$625,000), 1 state bank, and 1 private bank. L. is the seat of Purdue Univ., the state agricultural college (organized 1874 and endowed with the national land grant), which had (1887-8) 30 professors and instructors, 256 students, 4,800 vols. in its library; grounds, buildings, and apparatus valued at \$320,000; productive funds \$340,000, income therefrom \$17,000, state appropriation for year \$24,000, and total income \$46,000; and was under the presidency of James H. Smart, LL.D. The city was settled in 1825, derived its early prosperity from being the head of navigation on the Wabash river, and has advanced rapidly since the completion of the Wabash and Erie canal. Pop. (1860) 9,387; (1870) 13,506; (1880) 14,860; (1885) about 20,000.

LAFAYETTE.

LAFAYETTE, *lâ-fâ-ët'*, MARIE JEAN PAUL ROCH YVES GILBERT MOTIER, Marquis DE: 1757, Sep. 6—1834, May 20; b. in the castle of Chavagnac, now in the dept. of Upper Loire; descended from an ancient family of Auvergne. He became a soldier at an early age, and 1777 went to America, to take part with the colonists in their war of independence. L. formed the resolution to offer his services to the American colonies in their struggle, while at a banquet given by the French officers in Metz to the Duke of Gloucester, brother of the King of England. Information had just been received from London of the declaration of independence, and of the British plans for crushing the rebellion. L. went to Paris to consult with old friends; these strongly dissuaded him from what seemed a hopeless and foolish project. But soon came news of the early disasters to the colonial forces; and L., whose first plan had been only to offer the services of himself and a few friends, rose with the magnanimous courage characteristic of him to give help on a larger scale: he resolved to buy a ship, to stock it with munitions of war, of which Washington was in great need, and to go in it to America. So grave was the situation that even the American envoy in France felt compelled to withhold further encouragement of L. in his plan. L., though a mere boy, had excellent prudence, and kept his plans secret, lest his government, coming to an official knowledge of them, might feel bound to check them at the demand of the British minister. Some one, however, revealed his scheme (his family, excepting his wife, all were strongly opposed to it); and when his ship was about ready to sail, L. was arrested and detained, and at length commanded to go to Marseilles, and there await orders. He started ostensibly for Marseilles; but in disguise reached his ship—which for safety had been removed to a neighboring port in Spain—and set sail, arriving in America 1777, June. His tender of service to the congress met at first some official coolness, as the list of military volunteer applicants was large; but he soon won the confidence of the congress, and received his commission as maj.gen. in the army. With Washington L. established loving relations at their first meeting, and these endured through life. The cabal against Washington in the congress and the army (see CONWAY, THOMAS, Count DE), sought, after a few months, to enlist the sympathy of the popular young French officer; but his native nobleness spurned all such intrigue. In the field his combined prudence, quickness, and bravery, caused L. to be intrusted by Washington with important, though not at first extensive, commands. At the battle of Brandywine he was wounded in the leg; and this wound doubtless secured him the command of a division.

Toward the end of 1778 L. went to France, against which England had now declared war, to report to his king and to further the interests of the colonies. He re-

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turned 1779, Apr.; and soon thereafter a French fleet arrived with large supplies of munitions of war and a land force. L., who had used all his influence for the sending of these supplies, had by his urgent representations also greatly aided to procure the issuing of orders putting all the French military and naval force in America under the control of Washington—thus precluding those conflicts of authority and that lack of unity in action which might have been fatal to the success of the colonial arms. The marquis fought at the battle of Monmouth, 1778; and later was charged with the defense of s. Va., which duty he performed with as much success as was possible under unfavorable circumstances, and with a force always inferior. He held Cornwallis in check 1781, borrowing money on his own account from bankers in Baltimore to supply the needs of his troops. In the final battle of Yorktown he bore an honorable part. Soon afterward he obtained from the congress leave to return to France, to take part in negotiations for a general peace between France, Spain, Holland, and the American colonies on one side, and Britain on the other. To the generous young marquis was given the privilege of first communicating to the American congress the joyful intelligence of the treaty of peace, signed, as to its preliminaries, 1782, Nov. 30. Then, burdened with the gratitude of the new nation, he returned to his native land, which awaited him with the admiration due to such surpassing chivalry and heroism.

L. never had large bodies of troops under his command, and thus was precluded from any display of high military genius. In all soldierly duties that devolved on him, he acquitted himself with honor.

The friendship of Washington had exerted great influence in the development of L.'s mind and the formation of his opinions. He had imbibed liberal principles, and eagerly sought to promote a thorough reform in his native country. He was called to the assembly of notables 1787, and was one of those who most earnestly urged the assembly of the states. He took part also in the movements which converted the assembly of the states into the national assembly 1789. He was very active in the proceedings of the assembly, and being appointed to the chief command of the armed citizens, laid the foundation of the national guard, and gave it the tricolor cockade. In these first periods of the Revolution, it seemed as if L. had the destinies of France in his hands. But he found himself unable to control the excitement which sprang up. The extreme republicans soon came to dislike him, because he advocated a constitutional kingdom; and the court-party, especially the queen, disliked him—in spite of the services that he rendered them—because of his zeal for the new order of things. With Bailly, he founded the club of the Feuillants. After the adoption of the constitution of 1790, he retired to his estate of Lagrange, till he received the

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command of the army of Ardennes, with which he won the first victories at Philippeville, Maubeuge, and Florennes. Nevertheless, the calumnies of the Jacobins rendered him exceedingly unpopular, and he was accused of treason, but acquitted. After several vain efforts to maintain the cause of rational liberty, he left Paris for Flanders, but was taken prisoner by the Austrians, and remained at Olmütz till Bonaparte obtained his liberation 1797; but he took no part in public affairs during the ascendancy of Bonaparte. He sat in the chamber of deputies 1818-24 as one of the extreme Left, and 1825-30 he was again a leader of the opposition. In 1830 he was active in the Revolution, and commanded the national guards. On his visit to the United States, 1824, as a public guest by invitation of the congress, that body voted him a grant of \$200,000 and a township of land. The heart of the nation was as the heart of one man in its outburst of honor and grateful love toward the chivalrous and heroic friend who nearly half a century before had cast himself in with them in their almost desperate struggle.

LAFAYETTE, MARIE MADELEINE PIOCHE DE LAVERGNE, Comtesse DE: 1633-93: authoress of a number of novels, excelled by no works of that age in the development of character. Her father, Aymar de Lavergne, was gov. of Havre. She received an excellent education, and in 1655 married the Count de L., after which her house became a resort of the most distinguished literary men of her age, at the same time that it was frequented by the persons of highest rank and fashion in Paris. Her novels, *Zaïde* and *La Princesse de Clèves*, have been frequently reprinted.

LAFAYETTE COLLEGE: in Easton, Penn.; chartered 1826, organized 1832, opened under the presidency of its founder, the Rev. George Junkin, D.D., and conducted under the auspices of the Presb. Church. It had (1886-7) 22 resident professors and tutors, 5 endowed professorships, collegiate course of four years, 21,000 bound vols. in its libraries, \$270,303 in productive funds, \$13,500 income therefrom, \$5,480 receipts from tuition fees, \$11,195 receipts from other sources, \$30,175 total income, \$15,500 in benefactions, and 289 students. It has received nearly \$1,000,000 in endowments, and expended \$300,000 on buildings and apparatus for scientific and technical instruction. Six schools or courses of study are provided: classical, scientific, Latin-scientific, mining engineering, civil engineering, and chemistry; and in addition special courses are given on iron, road-engineering, and chemistry. The institution is noted for its course of Anglo-Saxon and English in connection with comparative philology; as a meteorological centre, where since 1853 the govt. observations and the Smithsonian Institution collections have been prepared for publication; as a centre of technical education in coal and iron, because of the surrounding coal and iron re-

LAFFITTE—LAFITTE.

gions of Penn. and N. J; and as the owner of the most complete flora of Penn. in existence. The Rev. William Cassiday Cattell, D.D., LL.D. was pres. 1863-83; resigning, he was succeeded by the Rev. James H. Mason Knox, D.D., LL.D.

LAFFITTE, *lâ-fêt'*, JACQUES: 1767, Oct. 24—1844, May 26; b. Bayonne, France; of humble parentage: banker and statesman. He was early employed as a clerk by the rich banker Perregaux in Paris, and succeeded him in business 1809. He soon rose to great wealth and a European reputation. He was made pres. of the chamber of commerce, and 1814 gov. of the Bank of France. On the return of Napoleon from Elba, Louis XVIII. deposited a large sum in L.'s hands; and after the battle of Waterloo, Napoleon intrusted 5,000,000 francs to him, which he kept safe, though the government made some attempts to lay hold of it. After the second restoration, he became one of the opposition in the chamber of deputies, and enjoyed the highest popularity in Paris. When the revolution broke out 1830, he wrote to the Duke of Orleans, saying, 'You have to make your choice between a crown and a passport.' He freely supplied the money requisite on that occasion. He became one of the first ministry of the new king, and 1830, Nov., was intrusted with the formation of a cabinet, the conservative character of which caused the loss of his popularity. Meanwhile his banking affairs fell into confusion, and he was obliged to sell all his property to pay his debts. A national subscription preserved him his house in Paris. Again elected to the chamber as a deputy for Paris, he became a leader of the opposition.

LAFITTE, *lâ-fêt'* (or LAFFITE), JEAN: about 1780—1826; b. France: buccaneer. He settled in New Orleans with his elder brother Pierre about 1809, and for a while engaged in blacksmithing. Subsequently he became interested in the successes of the privateersmen and smugglers then infesting the region of the W. India Islands, and preying on the rice commerce of Spain, and joined them. His courage and audacity soon promoted him to chief leadership. He fitted out several privateers under commissions granted by the French govt. at Guadaloupe, and when these commissions expired soon after the declaration of the independence of Colombia, he received others from the new govt. at Carthagená. The brothers established headquarters at Grande Terre, in Barataria Bay, in the Gulf of Mexico, and conveyed thither for sale their numerous and costly captures. In 1814 the Lafittes were offered naval commissions and large grants of money and land if they would join the British in the war against the United States; but they declined and informed the gov. of La. of the offer. They also tendered the services of themselves, their vessels, and their followers to the gov., on condition of pardon for past offenses. The gov. proposed acceptance, but

LA FLÈCHE—LA FONTAINE.

was overruled by his council; and a combined U. S. army and naval expedition made a sudden descent on Grande Terre, broke up the headquarters, and took L.'s vessels and booty to New Orleans. When Gen. Jackson assumed command at New Orleans, he accepted the services of the Lafittes and their followers, who gave him valuable aid during the memorable battle, and Pres. Madison proclaimed full pardon for privateering and smuggling prior to 1815, Jan. 8. After the war the Lafittes were settled at Galveston 1816-20, and there resumed depredations against Spanish commerce off the coast of Yucatan. L. is believed to have died in Cozumel or Isla de Mugerres, Yucatan. Several romantic works have been founded on the careers of the brothers.

LA FLÈCHE, *là flāsh'*: town in France, dept. of Sarthe, on the right bank of the Loir, about 24 m. s.w. of Le Mans. It has a milit. acad., founded as a college by Henry IV. 1607. There are various manufactures. Pop. (1876) 7,468.

LA FONTAINE, *là fōn-tān'*, F. *là fōng-tān'*, JEAN DE: French poet, distinguished above all his countrymen as a fabulist: 1621 (prob.), July 8—1695, Apr. 13; b. Chateau Thierry, Champagne; son of a Maître des Eaux et Forêts. In his early youth, he learned almost nothing, and at the age of 20, he was sent by his father to the Oratory at Rheims, in a state of extreme ignorance. Here he began to show decided taste for the classics and poetry. Though selfish and vicious to the last degree, he possessed withal a certain childlike *bonhomie*; it was not grace, or vivacity, or wit, but a certain soft and pleasant amiability of manner, so that he never wanted friends. He successively found protectors in the Duchess de Bouillon, who drew him to Paris; in Madam de Sablière, and in M. and Madame Hervart. He had the friendship of Molière, Boileau, Racine and other contemporary celebrities; and even the saintly Fénelon lamented his death in extravagant strains. In 1693, after a dangerous illness, he carried into execution what a French critic characteristically terms his *projet de conversion*, and spent the brief remainder of his life in a kind of artificial penitence, common enough among licentious men and women in those sensual days. He died at Paris. He was ludicrously absent-minded and had a childlike inefficiency in affairs. His finest productions, are *Contes et Nouvelles en Vers* (Paris 1665; 2d part, 1666; 3d part, 1671), and *Fables Choies mises en Vers* (also in three parts, of which the first appeared 1668, and the third 1693). The *Contes* reflect the universal immorality of the times, and are now little read outside of France. The *Fables* are universally known as marvels of literary art, vivid narration, and sagacious reflection on life and character: the editions of the *Fables* have been innumerable. The best ed. of L. F.'s collected works is that of Walckenaër (18 vols. Paris 1819-20; improved, 6 vols. 1622-23). See Taine's *Essai sur les Fables de L. F.* 1860.

LA FOURCHE—LAGER-BEER.

LA FOURCHE, *lâ fôrsh*: bayou in s.e. La., an outlet of the Mississippi, leaving that river on the w. bank at Donaldsonville and extending 150 m. to the s.e., intersecting the parish of La Fourche and emptying into the Gulf of Mexico. It is navigable for 100 m. from the gulf, and is the channel of considerable inland commerce.

LAG, *v. lăg* [W. *llag*, loose, slack: Gael. *lag*, feeble, to grow faint or weary: Gr. *lagaros*, slack, pliant: Icel. *lakra*, to lag behind: L. *laxus*, lax, loose]: to trail behind; to loiter; to fall behind; to flag; to move slowly; to delay: ADJ. in OE., coming behind; sluggish; late; *long delayed; tardy: N. the rump or fag-end; one who hangs behind. LAG'GING, *imp.*: ADJ. loitering; falling behind. LAGGED, *pp. lăgd*. LAGGARD, *n. lăg'êrd*, or LAG'GER, *n. -êr*, a slow or tardy person; a loiterer. LAG'GINGLY, *ad. -lî*.—SYN. of 'lag, *v.*': to linger; saunter; tarry; be tardy.

LAGAN, *n. lă'gân* [Mæso-Gothic, *lagjan*, to lay, to place; comp. Eng. *lag*, to trail behind: W. *llag*, loose, slack]: applied to goods sunk in the sea from a vessel, and fastened to a buoy or float that they may be found again: V. to sink and float goods at sea. LA'GANING, *imp.* LAGANED, *pp. lă'gând*. LAGAN GOODS, merchandise placed in the sea from a vessel, sunk in the water with a buoy attached, with the view of subsequent recovery. *Note.*—LAGAN is the correct word, but LIGAN, apparently through some confusion, is used precisely in same sense; the AS. *licgan*, Scot. *lig*, Icel. *liggja*, to lie, show, however, an identity of origin: see FLOTAGE, and note under JETSAM.

LAGENIFORM, *a. lă-jě'nî-fawrm* [L. *lagēna*, a bottle, a flask; *forma*, shape]: in *bot.*, having a shape like a Florence flask.

LAGER-BEER, *n. lâ-gér-bēr'* [Ger. *lager*, a bed, a storehouse: *bier*, beer]: store-beer, or beer laid up or stored for some months before use; a popular German beer. LAGER-WINE, old bottled wine; wine which has been kept in the cellar for some time.—*Lager-beer* is produced by a process differing somewhat from that used in other kinds of beer (see BEER). Ordinary beer and ale are fermented at high temperatures; but L.-B. is slowly fermented at a low temperature, usually 40°—50° F. Till recently L.-B. was fermented in the United States in the winter. In late years, however, the consumption and demand have increased so rapidly that it is brewed the year round, in summer in ice-cooled rooms; and instead of being laid away for cooling, it is artificially cooled and sent out for consumption a day or two after it is made. For summer beer, which is not supposed to be used under 4 or 6 months, 3 bushels of malt and 1½—3lbs. of hops are used for each barrel; for winter beer, that may be used as soon as made, 2—3

LAGERSTRÆMIA.

bushels of malt and 1 lb. of hops per barrel are used; and for 'bock,' an extra strong, sweeter beer, brewed in small quantities to last customers during the interval between the closing of the winter and the opening of the summer beer seasons, $3\frac{1}{2}$ bushels of malt and 1 lb. of hops per barrel are used. Summer, or lager, beer should have 4 to 6 months for its preparation; winter, or Schenk, beer 4—6 weeks; and bock beer 2 months; but all are now delivered for consumption before the after-fermentation occurs, and the effervescence that accompanies fermentation is imitated by means of compressed bits of bicarbonate of soda introduced into the keg through its bung-hole. Glucose, made from corn-starch, is extensively used as a substitute for barley, when barley is scarce or high-priced; but the lack of many of the qualities of barley renders beer made from substitutes inferior in quality. The brewing of L.-B., distinct from that of ale, has become one of the noted industries of the United States, and till the summer 1889 was conducted almost wholly on German-American capital and with German labor. Early in that year, agents of English capitalists and syndicates personally examined the largest breweries in the United States, and soon afterward purchased many, on a basis of two-thirds cash and one-third stock, the English companies invariably retaining the former proprietors as superintendents.

LAGERSTRÆMIA, *lăg-ēr-strē'mī-ā*: genus of plants of nat. ord. *Lythraceæ*, type of a sub-ord. *Lagerstrœmieæ*, which is distinguished by winged seeds, and in which are found some of the noblest trees of tropical forests, whereas the true *Lythreæ* are generally herbaceous. *Lagerstrœmia Reginæ* is the Jarool of India—a magnificent tree, with red wood, which, though soft, is durable under water, and is used for boat-building.

LA'GO MAGGIORE: see MAGGIORE, LAGO.

LAGOMYS, n. *lăg'ō-mīs* [Gr. *lagos*, a hare; *mus*, a rat]: genus of rodent quadrupeds, of family *Leporidae*, much resembling hares or rabbits, but with limbs of more equal length, more perfect clavicles, longer claws, longer head, shorter ears, and no tail. They are interesting from their peculiar instincts, storing up herbage for winter use in heaps or stacks. The Alpine L., or Pika of Siberia (*L. alpinus*), largest of the genus, is scarcely larger than a guinea-pig, yet its stacks are sometimes four or five ft. high, by eight ft. in diameter, and often afford adventurous sable-hunters the food necessary for their horses. The little animals live in burrows, from the inhabited part of which galleries lead to the stacks. The herbage of which they are composed is of the choicest kind, and dried so as to retain much of its juices, and form the very best of hay.

LAGOON—LAGOSTOMUS.

LAGOON, n. *lă-gôn'* or **LAGUNE'**, n. *-gûn'* [Sp. and It. *laguna*, a marsh: It. *lago*, a lake—from L. *lacûna*, a pool—from *lacus*, a lake]: shallow, and often marshy lake formed by the overflowing of the sea or of rivers, or by the infiltration of water from these: hence lagoons are sometimes divided into fluvial and marine. They are found only in low-lying lands, such as the coasts of Holland, Italy, the Baltic, and the e. coast of S. America; are generally shallow, and do not always present the same aspect. In some cases, they are completely dried up in summer; in others, after being once formed, they preserve throughout the year the character of stagnant marshy pools; and in others the sea, which reunites them to itself in winter, is separated from them in summer by a bar of sand or shingle.

LAGOS, *lă'gôs*: island and town of Africa, on the coast of Upper Guinea. The island lies at the entrance to a lagoon of the Bight of Benin, near the mouth of the river Ogun: area 73 sq. m.; pop. (1881) 75,720. The town is at the w. end of the island, 150 m. w. of Benin. A number of English and other traders reside here, and the town contains many good houses built in the English style. L. was formerly a notorious seat of the slave-traffic. It was captured and destroyed by the British 1851, Dec., and a treaty was concluded by which the ruler guaranteed freedom of commerce, the protection of Christianity, and the abolition of the slave-trade and of human sacrifices. L. since 1861, has been a British possession. Value of imports (1880), £407,000; exports, £577,000.

LAGOS, *lă'gôs*: city in Mexico, state of Jalisco near the boundary of Guanajuato. It has some fine churches. There are growing manufacturies, and the town has prospective importance in view of railroads which are to connect it with the capital, with the Rio Grande, and with the Pacific. Pop. abt. 25,000.

LAGOS, *lă'gôs*: city and seaport of Portugal, province of Algarve, on a wide bay, 23 m. e. from the extremity of Cape St. Vincent. The harbor affords protection from n. and w. winds only, and accommodates only small vessels. There is a productive tunny-fishery in the vicinity. In the bay of L., Admiral Boscawen obtained a signal victory over the French Toulon fleet, 1759, Aug. 18.—Pop. 7,300.

LAGOSTA, *lă-gôs'tâ* (ancient *Lastobon*): island belonging to Austria, off the coast of Dalmatia, in the Adriatic; 6 m. long, 4 m. wide. It has a steep rocky coast and mountainous interior. Pop. 1,200.

LAGOSTOMUS, *la-gôs'to-mûs*: genus of the *Chinchillidæ*, ord. *Rodentia*; an interesting S. American animal having many resemblances to the rabbit. The viscacha of the pampas is the principal species. They live in burrows which communicate underground like exten-

LAGOTIS—LAGRANGE.

sive subterranean villages, and around the mouths of the burrows they gather stones, bones of animals, and other objects in large piles. Another genus of the same family is *Lagotis* (q.v.); see CHINCHILLA.

LAGOTIS, *la-gō'tis*, or LAGIDIUM, *la-jīd'i-ūm*: genus of the family *Chinchillidæ*, ord. *Rodentia*. There are two species, both S. American and known as mountain viscachas, as distinguished from *Lagostomus* (q.v.) viscachas of the pampas or plains. They are found on the w. slopes of the Andes in Chili, Peru, and Ecuador. See CHINCHILLA.

LAGRANGE, *lā-grōngzh'*, JOSEPH LOUIS, Comte: one of the greatest of mathematicians: 1736, Jan. 25—1813, Apr. 10; b. Turin; of French extraction, grandson of Descartes. When still a youth, he solved the isoperimetrical problem of Euler, and when scarcely 19 years of age, was appointed prof. of mathematics in the Artillery School in Turin. Frederick the Great appointed him Euler's successor, as director of the Acad. at Berlin, in 1759. After Frederick's death, Naples, Sardinia, Tuscany, and France strove for the honor of offering L. a better position. He accepted the offer of France, and took up his quarters in the Louvre 1787, obtaining a pension of 6,000 francs (\$1,200). In 1791, he was chosen a foreign member of the Royal Soc. of London, and the same year the national assembly confirmed to him his pension, and he was appointed one of the directors of the Mint. He was in great danger during the Reign of Terror, but was not seriously molested, and was afterward prof. in the Normal and Polytechnic Schools. Napoleon made him a member of the senate, bestowed on him the grand cross of the Legion of Honor, the title Count, and many other favors. He died at Paris, and was interred in the Pantheon. His principal works are: *Memoirs 'on the Motion of Fluids' and 'the Propagation of Sound;'* another memoir refuted D'Alembert's views regarding the theory of the earth's formation. When only 24 years of age, he published his *New Method*, subsequently known as *Calculus of Variations*, thus adding a new and powerful weapon to the philosophical armory. In 1764, his memoir on the 'Libration of the Moon' took the first prize at the Acad.: in this treatise he showed the extent and fruitfulness of the principle of 'virtual velocities' which he afterward so successfully applied to mechanics. Next appeared, works on the solution of 'numerical' and 'algebraic' equations; and in 1787, *Mécanique Analytique*, in which mechanics is reduced to a mere question of calculation. His last important works were, *Calcul des Fonctions Analytiques*, *Traité des Fonctions*, and *Résolution des Equations Numériques*. L. made many other important investigations in pure and mixed mathematics, particularly in astronomy—the chief subjects of which are, the problem of Three Bodies, the Long Inequality of Jupiter and Saturn, the

LAGRIMOSO—LAHORE.

moon's Secular Inequality, attraction of ellipsoids, perturbations of Jupiter's satellites, diminution of the ecliptic, variation of the elements of the planetary orbits, etc.

LAGRIMOSO, *lăg-rî-mō'zo*: Italian term in music, meaning weeping, or mournfully; similar to *lamentoso*, which expresses the same in higher degree. The delivery should be heart-stirring, but at the same time free from mannerisms and embellishments.

LA GUAY'RA: see GUAYRA, LA.

LA GUÉRONNIÈRE, *lâ gû-ro-né-är'*, LOUIS.ÉTIENNE ARTHUR, Vicomte DE: 1816-1875, Dec. 23; of a noble family of Poitiers: French politician. He attracted notice first by the articles which he contributed to the *Avenir National* of Limoges, about 1835. Subsequently, he made the acquaintance of Lamartine, whom for many years he regarded as his political and literary master. Ultimately, he came to a rupture with Lamartine, and became an ardent Bonapartist, and after the *coup d'état* (1851, Dec. 2), the apologist of that audacious deed. In 1853 he entered the council of state. La G. stood so well in the good graces of the late French emperor, that his articles and pamphlets were considered to possess a semi-official value. In 1868, he went as ambassador to Brussels, and afterward to Constantinople. On the downfall of the empire, he was imprisoned for a time. Among his most noted publications are—*L'Empereur Napoléon III. et l'Angleterre* (1858), *L'Empereur Napoléon III. et l'Italie* (1859), *Le Pape et le Congrès* (1859), and *La France, Rome, et l'Italie* (1861).

LAHIJAN, *lâ-hê-jân'*: important trading-town of Persia, province of Ghilan, close to the s. shore of the Caspian Sea, 30 m. e.s.e. of Reshd. Pop. estimated 10,000 to 15,000.

LAHN, *lân*: important affluent of the Rhine (q.v.).

LAHORE, *lâ-hôr'*: one of the chief cities of the Punjab; on the left bank of the Ravi, the middle of the five rivers which give name to the country; lat. 31° 36' n., long. 74° 21' e. It is surrounded by a brick wall, formerly 25 ft. high, and by fortifications seven miles in circuit. In the n.w. corner of the city stand the citadel, the great magazine, and military workshops. The streets are narrow and gloomy, the bazaars well furnished, but the houses in general insignificant. Within the circuit, wells are abundant; the ground is well cultivated, adorned with magnificent gardens, and strewn with numerous ruins of bygone splendor. The town, is said to have possessed under the Moguls 1,000,000 inhabitants. In the 12th c., it was cap. of the dynasty of the Ghaznevides, and subsequently a favorite residence of the successors of Baber. In 1799, Runjeet Singh, Sikh prince, became ruler of Lahore; but as he chose for his

LAHR—LAICAL.

headquarters Amritsir, a city about 40 m. e., L. became neglected. Since 1849, the epoch of the British conquest of the Punjab, L., now the administrative cap. of the province, has advanced in prosperity. The town has a mean and gloomy appearance, relieved only by the Mosque of Aurungzebe, the tomb of Runjeet Singh, and the Mogul palace. L. is an important educational centre, having in it the Punjab Univ. College, the Oriental College, the Lahore Govt. College, and a medical school (with the Mayo Hospital), and a museum. There is not much commerce; but L. is connected by rail with most parts of the province, and so with the rest of India. Pop. (1881) 149,369.

The *civil division* of L., most central of the British Punjab, has 8,961 sq. m. Its climate is warm, rainfall scanty; harvests are largely dependent on irrigation. Pop. (1868) 1,889,495.

The *district* of L. has 3648 sq. m.; pop. 789,666.

LAHR, *lâr*: manufacturing town of Baden, on the Shutter, an affluent of the Rhine, 53 m. s.s.w. of Carlsruhe. It stands in a rich and beautiful district, and has manufactures of linen and woolen cloth, silk ribbons, leather, and tobacco. Pop. (1880) 9,390.

LAIBACH, or LAYBACH, *lîbâch*: town of Austria, cap. of the crownland of Krain or Carniola, in an extensive plain on the river L., 50 m. n.e. of Trieste. It contains a lyceum, gymnasium, and other educational institutions, and has extensive transit trade with Trieste, Fiume, Grätz, etc. Its cotton manufactures and sugar-refineries employ many of its inhabitants. To the s.w. of the town is the L. Morass, formerly often covered by the swollen waters of the river: it is more than 80 sq. m. in extent, and three-fourths of it have been brought under cultivation; the remainder affords an inexhaustible supply of turf.—Pop. (1880) 26,284.

This town is famous for the congress of monarchs 1821. The purpose of this congress was to secure the peace of Italy against Carbonarism, to arrest the increasing progress of revolution, and to restore in Naples and Sicily the former condition of affairs. The result of it was the passing of a resolution establishing among European nations the right of armed intervention in the affairs of any neighboring state which may be troubled with factions. In this congress the British minister refused to take part.

LAICAL, a. *lā'ī-kāl*, or LAIC, a. *lā'īk* [Gr. *laïkōs*, of or belonging to the common people—from *lāōs*, the people: mid. L. *laïcus*; It. *laico*; F. *laïque*, lay, secular]: pertaining to the people, as distinguished from the clergy. LAICALLY, ad. -*lî*. LAITY, n. *lā'ī-tî*, the people; not the clergy: see LAITY below.

LAID—LAITY.

LAID, *lād*: pp. of **LAY**, which see. **LAID-PAPERS**, writing papers with a ribbed surface, called *cream-laid*, *blue-laid*, etc., according to shade or color. **LAID UP**, stored up; confined to bed through sickness; put aside from use for a time, as a ship.

LAIDLIE, *lād'li*, ARCHIBALD, D.D: 1727, Dec. 4—1779, Nov. 14; b. Kelso, Scotland. After studying at the Univ. of Edinburgh, he was ordained to the Presb. ministry, and from 1759 pastor of the Scotch Church, Flushing, Holland. He acquainted himself with the Dutch language and theology (Reformed Dutch), accepted a call to the pastorate of the Collegiate Church, New York; and preached in the Middle Dutch Church, corner of Nassau and Cedar sts., the first sermon in English by a regular pastor to a Dutch congregation in America, 1764, Apr. 15. He was successful as a preacher, though at first there was opposition to him from some in the denomination. He d. at Red Hook, N. J.

LAIN, *lān*: pp. of **LIE**, which see.

LAIR, n. *lār* [Dut. *leger*, a bed: Dan. *leir*, a camp: Dut. *leggen*, to lie: AS. *leger*, a lying, a bed: Gael. *lār*, the ground]: the resting-place or couch of a wild beast; a pen or stall for cattle; in *OE.*, pasture-ground; in *Scot.*, the space for a grave.

LAIRD, n. *lārd* [Scot.: AS. *hlaford*, a lord]: in *Scot.*, a proprietor; a landed gentleman.

LAIS, *lā'is*: name of one, or, probably, two Greek courtesans, celebrated for extraordinary beauty. The elder is believed to have been born at Corinth, and lived during the Peloponnesian war. She was reckoned to possess the most graceful figure of any woman of her time in Greece, but she was capricious, greedy of money, and in her old age became a tippler.—The younger appears to have been born in Sicily, but came to Corinth when a child. She sat as a model to the painter Apelles, who is said to have recommended her to adopt the profession of a prostitute, in which she obtained a 'bad eminence.' She was stoned to death by some Thessalian women whom she had made jealous. Both of these women had temples erected to their memory.

LAISSEZ FAIRE, phrase, *lās-sā fär* [F. let alone]: a term applied to that mode of government which concerns itself as little as possible with regulating the affairs or proceedings of the people in general. A 'let-alone' policy in any interest or concern.

LAITY, *lā'ī-tī* [see **LAICAL**, **LAITY**]: name given in the Rom. Cath. Church and in other churches that emphasize the distinction of the clerical order, to all persons who are not in the ranks of the clergy (q.v.). The name appears to have originated as early as the 2d c., when the idea grew up that the priesthood formed an intermediate class between Christ and the Christian com-

LAKE.

munity. The influence which the laity had at first exercised in the government of the church gradually declined as the power of the hierarchy increased, and though, as late as the end of the 3d c., cases occurred in which learned laymen taught publicly with the approval of bishops, still this liberty was ever more and more narrowed, until finally, 502, a synod at Rome under the bishop Symmachus forbade laymen to interfere in any way in the affairs of the church. The Prot. Church, in general, maintains on scriptural grounds the common and equal priesthood of all Christian disciples; still, as marking a visible distinction of office, the words clergy and laity continue in very general use, the depth of the distinction implied varying with the 'church' views of those employing them. Some strict Protestants are careful to say minister and people, instead of clergy and laity; others use the words clergy and laity in a loose conversational sense, but not in formal utterance; as also the words temple, altar, priest.

LAKE, n. *lāk* [L. *lacus*, a lake: It. *laco*: F. *lac*, a lake: comp. Gael. and Scot. *loch*: Ir. *lough*, an arm of the sea, a lake]: body of water surrounded by land. There are (1) some lakes which neither receive nor emit streams; (2) some, fed by springs, emit, but do not receive streams; (3) others, as the Caspian and Aral Seas, receive rivers, but have no visible outlet; but (4) by far the greater number both receive and emit streams. Most lakes under the third class are salt or brackish; Lake Tchad, in Africa, being an exception. LAKELET, n. a. little lake. LAKE-LIKE, resembling a lake. LAKY, a. *lā'ki*, pertaining to a lake. LAKE-DWELLINGS, dwellings in lakes, erected either on piles or on artificial islands. See LACUSTRINE, under LACUSTRAL: see also CRANNOGS.

LAKE, n. *lāk* [OF. *lacque*, a rose or ruby color—from LAC 1, which see]: name applied to all those colors which consist of a vegetable or animal dye, combined by precipitation with a white earthy basis, which is usually alumina, which has a remarkable property of uniting with and separating these colors from their solutions. Thus, if we take the colored solution of cochineal, and add to it a solution of alum, the alumina in the alum immediately combines with the coloring matter, and the result is a precipitate which is carmine or Florentine lake. Red lake is made in a similar manner from Brazil wood, a little solution of tin being added to heighten the color, and potash being used to accelerate the precipitation. Lakes of several shades of red and purple are made from madder-roots, the quantity of potash used determining the proper color. Two or three yellow lakes are used, the manufacture of which is very similar; they are prepared from yellow berries or from arnotto. Almost every known animal or vegetable color may be converted into a *lake*, but those mentioned are the ones practically useful. They are employed chiefly by calico-printers and paper-stainers.

LAKE—LAKHNAOTI.

LAKE, in Law: property of the owner of the land which surrounds it; by which is meant that not only the water and the use of it, but the soil under the water belongs to such owner. Where the land surrounding the lake belongs to different owners, each has *primâ facie* the right to use the lake for ordinary purposes, including fishing or boating; but it depends on how the properties were acquired, whether and how far this general rule applies in any particular case.

LAKE OF THE THOUSAND ISLANDS: expansion of the St Lawrence (q.v.), extending about 40 m. below the n.e. end of Lake Ontario. It is well worthy of its name, being said to contain 1,700 islets, the largest measuring 10 m. by 6. It separates N. Y. from Upper Canada.

LAKE OF THE WOODS: body of water 190 m. n.n.w. of Lake Superior; famous in the history of the international boundary between the United States and the Hudson's Bay Company's territories. It is named from the wooded islands that stud it. At its s.e. end, it receives Rainy River from Rainy Lake; and at its n. w. extremity, it sends forth the Winnipeg on its course to Hudson's Bay. According to the treaty which closed the war of independence, it was divided by a central line between England and her old colonies. It measures about 300 m. round; and its remotest point is in lat. 49° n., and long. 95° w.

LAKE SCHOOL: name with which the *Edinburgh Review* dubbed certain English poets (Wordsworth, Coleridge, and Southey) who, toward the close of last c., took up their residence in the Lake district of Cumberland and Westmoreland, and who—though widely different from each other in almost every other respect—professed to seek the sources of poetical inspiration in the simplicity of nature, rather than in the works of their predecessors and the fashion of the times. The epithet is still occasionally heard, though it has no aptness, since it does not help to a better knowledge of the men.

LAKE SURVEY: hydrographic survey of the great American lakes and rivers, in or on the boundary of the United States; including soundings, and preparation of maps and charts of coast lines. The work, not far below that on the Atlantic coast in magnitude, covers about 6,000 m., and has been done on the same principles, and by the same govt. dept.: see COAST AND GEODETIC SURVEY, UNITED STATES.

LAKH: see LAC.

LAKHNAOTI: see GAUR, ruined city in Bengal.

LAKSHMĪ.

LAKSHMĪ, *lāksh'mē*, Hind. *lūksh'mē*, in Hindu Mythology: consort of the god Vishn'u (q.v.), considered also his female or creative development. According to the mystical doctrine of the worshippers of Vishn'u, this god produced the three goddesses, Brāhmī, Lakshmi, and Chan'dikā, the first representing his creating, the second, his preserving, and the third, his destroying energy. This view, however, founded on the superiority of Vishn'u over the two other gods of the Hindu triad—Brāhmī, or Saraswatī, being generally looked on as the energy of Brahmā, and Chan'dikā, another name of Durgā, as the energy of Śiva—is later than the myth, relating to L., of the epic period; for, according to the latter, L. is the goddess of Fortune and of Beauty, and arose from the Ocean of Milk when it was churned by the gods to procure the beverage of Immortality, and it was only after this wonderful occurrence that she became the wife of Vishn'u. When she emerged from the agitated milk-sea, one text of the Rāmāyan'a relates, 'she was reposing on a lotus-flower, endowed with transcendent beauty, in the first bloom of youth, her body covered with all kinds of ornaments, and marked with every auspicious sign. . . . Thus originated, and adored by the world, the goddess, called also *Padmā* and *S'ri*, betook herself to the bosom of Hari—i.e., Vishn'u.' A curious festival is celebrated in honor of this divinity on the fifth lunar day of the light half of the month Māgha (Feb.), when she is identified with Saraswatī, the consort of Brahmā, and the goddess of learning. In his treatise on festivals, a great modern authority, Raghunandana, mentions, on the faith of a work called *Samwatsara-sandīpa*, that L. is to be worshipped in the forenoon of that day with flowers, perfumes, rice, and water; that due honor is to be paid to inkstand and writing-reed, and no writing to be done. Wilson, in his essay on the *Religious Festivals of the Hindus* (works, II. 188, ff.), adds that, on the morning of Feb. 2, 'the whole of the pens and inkstands, and the books, if not too numerous and bulky, are collected, the pens or reeds cleaned, the inkstands scoured, and the books, wrapped up in new cloth, are arranged upon a platform, or a sheet, and strewn over with flowers and blades of young barley, and that no flowers except white are to be offered. After performing the necessary rites . . . all the members of the family assemble and make their prostrations; the books, the pens, and ink have an entire holiday; and, should any emergency require a written communication on the day dedicated to the divinity of scholarship, it is done with chalk or charcoal upon a black or white board.' In different parts of India, this festival is celebrated at different seasons, according to the double aspect under which L. is viewed by her worshippers. The festival in the month Māgha seems originally to have been a vernal feast, marking the commencement of the season of spring.

LALANDE—LALLY.

LALANDE, *lâ-lôngd'*, JOSEPH JÉRÔME LEFRANÇOIS DE: 1732, July 11—1807, Apr. 4; b. Bourg: eminent French astronomer. He applied himself with such success to mathematics and astronomy, that the French Acad. sent him to Berlin 1751, to determine the moon's parallax, at the same time that Lacaille was sent to the Cape of Good Hope. In 1752, he returned, and was appointed one of the astronomers-royal; and 1761 succeeded Lemonnier as prof. of astronomy in the Collège de France. His lectures had rare attractiveness, and he published several popular astronomical works, as well as works of profound science. He became director of the Paris Observatory. His character was marked by extreme vanity; but no one has ever equalled him as a lecturer on astronomy, and few have contributed more to the general progress of astronomical science. His principle work is his *Traité d'Astronomie* (2 vols. Paris 1764—a new and augmented edition, 4 vols. Paris 1771–81). He published also minor works on astronomy, navigation, etc., and an account of his travels in Italy during 1765,6 (9 vols. Paris 1786).

LALITA-PATAN, *lâ-lē'tā-pâ-tân'*, or **PATAN'**: town of Nepal, 4 m. s. from Khatmandu. L. was formerly cap. of a small independent state. It is a neat town, and has some good public buildings. There are manufactures of cotton, copper, and brass. Pop. supposed about 24,000.

LALITA-VISTARA: one of the most celebrated works of Buddhistic literature. It contains a narrative of the life and doctrine of the Buddha S'âkyamuni (see **BUDDHA**), and is considered by the Buddhists as one of their nine chief works, treating of Dharma, or religious law. It is one of the developed Sûtras of the Mahâyâna system. An edition of the Sanskrit text, and an English translation of this work by Bâbu Râjendralâl Mitra, is in process of publication under the auspices of the Asiatic Soc. of Bengal. A French translation from the Tibetan has been made by Ph. Ed. Foucaux. In Chinese, there are two translations. See E. Burnouf, *Introduction à l'Histoire du Bouddhisme Indien* (1844); and W. Wassiljew, *Der Buddhismus, seine Dogmen, Geschichte und Literatur* (St. Petersburg 1860).

LALLY, *lâ-lē'*, THOMAS ARTHUR, Count DE, Baron DE TOLLENDAL, *to-lông-dâl'*: French general, of historic note as the victim of a judicial murder: 1702, Jan.—1766, May 9; b. Dauphiné; son of Sir Gerard Lally, an Irish Jacobite refugee, and commander of an Irish regiment. L. distinguished himself as a soldier in Flanders; accompanied Prince Charles Edward to Scotland 1745; and 1756, was made a lieut.gen. and appointed commander-in-chief in the French E. Indian settlements. He commenced hostilities against the British in India, took many places, and besieged Madras itself; but sustained a severe defeat under the walls of Vandarachi,

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and was compelled to retreat to Pondicherry, which was attacked 1760, Mar., by land and sea by a greatly superior British force. L., however, held out for ten months; and before Pondicherry fell, 1761, Jan. 16, the sufferings of its defenders were terrible. L. was conveyed as prisoner of war to England; but hearing that he had been accused in France of betraying his trust in India, he obtained leave to proceed to France for the vindication of his character. An investigation was promised, but no step was taken for a year, and then L. was only thrown into the Bastille, where he remained 19 months before his trial took place. Popular indignation at the French losses in India required a victim, and the parliament of Paris at last, 1766, May 6, condemned him to death for betraying the interests of the king and the Indian Company, and the sentence was executed three days after. But his son, supported by the powerful assistance of Voltaire, procured a royal decree 1778, May 21, declaring the condemnation unjust, and restoring all the forfeited honors.—The son, TROPHIMUS GERARD, Marquis DE LALLY-TOLLENDAL (1751, Mar. 5—1830, Mar. 11; b. Paris), was one of those nobles who, in the States General, 1789, united with the Third Estate; but alarmed at the democratic tendencies of the national assembly, he afterward allied himself more with the court. He earnestly sought to protect the king, but was himself compelled to flee to England. After the revolution of 18th Brumaire, he returned to France and lived at Bordeaux. Louis XVIII. made him a peer; but he remained true to his political principles, and defended constitutional liberty. He was author of a Defense of the French Emigrants, which made a great sensation in France, and of many other pamphlets.

LAMA, or LLAMA, n. *lâ'ma* or *lã'ma* [Peruvian], (*Auchenia lama*): a most useful S. American quadruped of the family *Camelidæ*; doubtful whether to be classed a distinct species, or as a mere domesticated variety of the Huanaca (q.v.). It was in general use as a beast of burden on the Peruvian Andes at the Spanish conquest, and was the only beast of burden used by the natives of America before the horse and ass were introduced by Europeans. It is still much used in this capacity on the Andes, the peculiar conformation of its feet (see *AUCHENIA*) enabling it to walk securely on slopes too rough and steep for any other animal. Many silver mines of the Andes could scarcely be worked but for the lamas. The burden carried by the L. should not exceed 125 lbs. When too heavily loaded, the animal lies down, and refuses to move, nor will either coaxing or severity overcome its resolution. It is generally very patient and docile. Its rate of travelling is about 12 or 15 m. a day. The L. is about three ft. in height at the shoulder, has a longish neck, and carries its head elevated. The females are smaller and less strong than

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the males, and only the latter are used for carrying burdens. The color is very various, generally brown, with shades of yellow or black, frequently speckled, rarely quite white or black. The flesh is spongy, coarse, and not of agreeable flavor. The hair or wool is inferior to that of the alpaca, but is used for similar purposes; that of the female is finer than that of the male. The L. has been introduced with the alpaca into Australia; but it seems adapted only for steep mountain regions.

LAMA, or LLAMA, n. *lā'mā* [from Tibetan *bLama*,* spiritual teacher or lord]: a Tartar priest. DALAI-LAMA, or GRAND LAMA, the chief or principal Lama, worshipped as a god. LAMAISM, n. *lā'mā-izm*, the religion of the Asiatic Tartars who worship the Grand Lama. LA'MAIS'TIC, a. *-tik*, pertaining to.—Lamaism prevails in Tibet and Mongolia. It is Buddhism (q.v.) corrupted by S'ivaism (see SIVA), and by Shamanism (q.v.), or spirit-worship. As ancient Buddhism knows no worship of God, but merely an adoration of saints, the latter is the main feature also of Lamaism. The essence of all that is sacred is comprised by this religion under the name of dKon mChhog gSsum (pronounced *Konchogsum*), which consists of the 'three most precious jewels'—viz., 'the Buddha-jewel,' the 'doctrine-jewel,' and 'the priesthood-jewel.' A similar triad is implied by the three Buddhistic formulæ: 'I take my refuge in Buddha; I take my refuge in the law (or doctrine); I take my refuge in the congregation (of the priests),' but it did not obtain the same dogmatic importance in Buddhism as in Lamaism, where it is looked on as a kind of trinity, representing an essential unity. The first person of this trinity is the Buddha; but he is not the creator, or the origin of the universe; as in Buddhism, he is merely the founder of the doctrine, the highest saint, though endowed with all the qualities of supreme wisdom, power, virtue, and beauty, which raise him beyond the pale of ordinary existence. The second jewel, or the doctrine, is the law or religion—that which is, as it were, the incarnation of the Buddha, his actual existence after he had disappeared in the Nirvāṇa. The third jewel, or the priesthood, is the congregation of the saints, comprising the whole clergy, the incarnate as well as the non-incarnate representatives of the various Buddhistic saints. The latter comprise the five Dhyāni-Buddhas or the Buddhas of contemplation; also all those myriads of Bodhisattwas, Pratyeka-Buddhas, and pious men, who became canonized after their death. It is obvious that among their number a portion only can enjoy practical worship; but the clergy, as the visible representative of these saints, claim and receive due homage at all the religious ceremonies. Inferior in rank to these saints are the gods and spirits,

* The small letters prefixed to the initials of the Tibetan words in this article are not pronounced.

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the former chiefly taken from the Pantheon of the S'ivaites. The highest position among these is occupied by the four spirit-kings—viz., *Indra* (q.v.), god of the firmament; *Yama*, god of death and the infernal regions; *Yamântaka*, or S'iva, as revenger in his most formidable shape; and *Vais'ravana*, god of wealth. The worship of these saints and gods consists chiefly in the reciting of prayers, and sacred texts, and the intonation of hymns, accompanied with a kind of music, which is a chaos of the most unharmonious and deafening sounds of horns, trumpets, and drums of various descriptions. During this worship, which takes place three times a day, the clergy, summoned by the tolling of a little bell, are seated in two or more rows, according to their rank; and on special holidays, the temples and altars are decorated with symbolical figures, while offerings of tea, flour, milk, butter, and others of a similar nature, are made by the worshippers; animal sacrifices or offerings entailing injury to life being forbidden, as in the Buddhistic faith. Lamaism recognizes especially three great festivals. The *Log gSsar*, or festival of the new year, in Feb., marks the commencement of the season of spring, or the victory of light and warmth over darkness and cold. The Lamaists, like the Buddhists, celebrate it in commemoration of the victory obtained by the Buddha S'âkyamuni, over the six heretic teachers. It lasts 15 days, and consists of a series of feasts, dances, illuminations, and other manifestations of joy; it is, in short, the Tibetan carnival. The second festival, probably the oldest festival of the Buddhistic Church, is held in commemoration of the conception or incarnation of the Buddha, and marks the commencement of summer. The third is the *water-feast*, in Aug. and Sep., marking the commencement of autumn. Baptism and confirmation are the two principal sacraments of Lamaism. The former is administered on the third or tenth day after birth; the latter, generally when the child can walk and speak. The marriage ceremony is to Tibetans not a religious, but a civil act; nevertheless, the Lamas know how to turn it to the best advantage, as it is from them that the bridegroom and bride have to learn the auspicious day when it should be performed; nor do they fail to complete the act with prayers and rites, which must be responded to with handsome presents. A similar observation applies to the funeral ceremonies of the Tibetans. Properly speaking, there are none requiring the assistance of the clergy, for Lamaism does not allow the interment of the dead. Persons distinguished by rank, learning, or piety, are burned after their death; but the general mode of disposing of dead bodies in Tibet, as in Mongolia, is that of exposing them in the open air, to be devoured by birds and beasts of prey; yet the Lama must be present at the moment of death, to superintend the proper separation of body and soul, to calm the departed spirit, and to enable him to

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be reborn in a happy existence. He must determine the auspicious day and hour when, and the auspicious place where, the corpse is to be exposed. The most lucrative part of his business, however, is the masses which he has to perform, until the soul is released from Yama, the infernal judge, and ready to re-enter into its new existence; the doctrine of metempsychosis being the same in this religion as in Buddhism.

One of the most interesting features of Lamaism is the organization of its hierarchy. Its summit is occupied by two Lama popes, one called *Dalai-lama*, i.e., Ocean-priest, or priest as wide as the ocean—he resides at Potala, near H'lassa; the other bearing the titles *Tesho-lama*, *Bogdo-lama*, etc., and officially called *Pan-chhen Rin po chhe*, literally, 'the right reverend great teacher-jewel' (i.e., precious teacher); he resides in the convent at bKra Shiss Lhun po, near gShiss Ka rTse. In theory, both popes have the same rank and authority, in spiritual as well as in temporal matters; but as the Dalai-lama possesses a much larger territory than the other, he is in reality much more powerful. Next in rank are the *Khutuktus*, who may be compared to the Rom. Cath. cardinals and archbishops. The third degree is that of the Khubilghans or Hobilghans—which Mongol name is more frequently given to them than the Tibetan title *Bjang chhub*—a translation of the Sanskrit Bodhisattwa. Their number is very great. These three degrees represent the clergy that claims to be the incarnation of the Buddhistic saints. The Dalai-lama and the Pan-chhen were in their former lives the two chief disciples of the great Lamaist reformer bTsong kha pa, who was an incarnation of the Bodhisattwa Amitâbha, or, as some will have it, of Manjus'ri and Vajrapân'i, and who is reputed to have founded, A.D. 1355 or 57 the present system of the Lama hierarchy. The Khutuktus were in their prior existences other Buddhistic saints of very great renown; and the Khubilghans are those reborn hosts of saintly patrons whom the temples and convents of Lamaism possess in boundless numbers. Till the end of last century, the clergy of these various classes determined the choice of the children into whose bodies the souls of their departed members had migrated. At present, however, it seems that the emperor of China exercises a paramount influence on the discovery of those transmigrations—in other words, on the filling up of clerical posts—and there can be no doubt that his influence is suprême in the case of determining the election of the two highest functionaries of this theocracy. In order to ascertain the re-birth of a departed Lama, various means are relied upon. Sometimes the deceased had, before his death, confidentially mentioned to his friends where and in which family he would re-appear, or his will contained intimations to this effect. In most instances, however, the sacred books and the official astrologers

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are consulted on the subject; and if the Dalai-lama dies, it is the duty of the Pan-chhen to interpret the traditions and oracles; whereas, if the latter dies, the Dalai-lama renders him the same service. The proclamation of so great an event, however, as the metempsychosis of a Dalai-lama or Pan-chhen is preceded by a close examination of the child that claims to be in possession of the soul of either of these personages. The reborn arch-saint, usually a boy four or five years old, is questioned as to his previous career; books, garments, and other articles, used and not used by the deceased, are placed before him, to point out those which belonged to him in his former life. But however satisfactory his answers be, they do not yet suffice. Various little bells, required at the daily devotions of the Lama, are put before the boy, to select that which he did use when he was the Dalai-lama or Pan-chhen. 'But where is my own favorite bell?' the child exclaims, after having searched in vain; and this question is perfectly justified; for, to test the veracity of the reborn saint, this particular bell had been withheld from him. Now, however, there can be no doubt as to the Dalai-lama or Pan-chhen being bodily before them: the believers fall on their knees, and the Lamas who successfully performed all these frauds join them in announcing the momentous fact.

Besides these three classes of the higher clergy—representing the incarnate existence of departed saints, and chosen, therefore, without regard to merit, among the children of privileged families—Lamaism possesses a lower clergy, which, having no claim to incarnate holiness, recruits its ranks on the principle of merit and theological proficiency. It has four orders: the pupil or novice, who enters the order generally in his seventh or ninth year; the assistant priest; the religious mendicant; and the teacher, or abbot. To these may be added two academical or theological degrees, also two dignities, conferred by the sovereign Lamas on those doctors who have distinguished themselves by extraordinary sanctity or learning. All the members of these orders must make the vow of celibacy, and by far the greater number of them live in convents. A Lamaist convent, *dGon pa*, consists of a temple, which forms its centre, and of a number of buildings connected with the temple, and appropriated to the meeting-rooms, the library, refectory, dwellings, and other spiritual and worldly wants of the monks. At the head of the convent is a Khubilghan, or an abbot, the latter being elected by the chapter, and appointed by the Dalai-lama, or the provincial Khubilghan. In addition to these orders of monks and convents, Lamaism has likewise its nuns and nunneries.

The Lamaist bible bears the name of *bKa' gjur* (pronounced *Kanjur*)—i.e., 'translation of the words,' *scil.*, of the Buddha. It contains not less than 1,083 works, which in some editions fill 102 to 108 vols, folio. It

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consists of the following sections: 1. '*Dulba* (Skr. Vinaya), or discipline; 2. *Sher phjin* (Skr. Prajñāpāramitā), or philosophy and metaphysics; 3. *Phal chhen* (Skr. Buddhavata Sangha), or the doctrine of the Buddhas, their incarnations, etc.; 4. *dKon brTsegss* (Skr. Ratnakūṭa), or the collection of precious things; 5. *mDo ssDe* (Skr. Sūtra), or the collection of Sūtras; 6. *Mjang 'dass* (Skr. Nirvāna), or the liberation from worldly pains; 7. *rGjud* (Skr. Tantras), or incantations, etc. Besides this mass of works, there is a very voluminous collection, the *bss Tan 'gjur*, or the translation of the doctrine, 225 vols. in folio; but it does not seem to possess canonical authority.

The oldest history of Lamaism is shrouded in darkness. For its growth and development under the Mongol and Manju dynasties, see TIBET.—The best work on Lamaism is *Die Lamaische Hierarchie und Kirche*, von Karl Friedrich Koepfen (Berlin 1859). See also Huc, *Souvenirs d'un Voyage dans la Tartarie, le Tibet et la Chine* (Paris 1852); and Karl Ritter's *Erkunde* (vol. IV.).

LAMANTIN, n. *lă-măn'tin*, or LAMEN'TIN, n. *-măn'tin* [F. a corruption of *la manati*, the manatee]: a herbivorous sea-animal; the sea-cow or manatee (q.v.).

LAMAR, *la-mâr'*, LUCIUS QUINTUS CINCINNATUS (2d), LL.D.: lawyer: b. Putnam co. Ga., 1825, Sep. 1. He graduated at Emory College, Ga., 1845; was admitted to the bar 1847; was adjunct prof. of mathematics in the Univ. of Miss. 1849-50; practiced law in Covington, Ga., and was elected member of the legislature 1853; and settled in Lafayette, Miss., 1854. In 1856 he was elected to congress as a democrat, and served by re-elections till the secession of Miss., when he resigned and entered the Confederate army as col. of the 19th Miss. regt. He was sent on a diplomatic mission to Russia 1863. After the war he was elected prof. of political economy and social science in the Univ. of Miss. 1866, was transferred to the chair of law 1867, and resumed practice soon afterward. In 1872 he was elected a representative in congress, 1874 re-elected, 1876 elected U. S. senator, 1885 appointed by Pres. Cleveland sec. of the dept. of the interior, and 1888 became an associate judge of the U. S. supreme court.

LAMARCK—LA MARMORA.

LAMARCK, *lâ-mâr'k'*, JEAN BAPTISTE PIERRE ANTOINE DE MONET, Chevalier DE: distinguished French naturalist: 1744, Aug. 1—1829, Dec. 20; b. of noble family at Barentin, Picardy. He was intended for the priesthood, but preferred the army. An accidental injury, which placed his life in danger, put a stop to this career, and he became a banker's clerk. His first scientific pursuit was that of meteorology, from which he turned to botany, and attempted to introduce a new system of classification, which he called the Analytical System, but which found little acceptance. In 1778, he published his *Flore Française* (3 vols.), afterwards the basis of the work of Decandolle. He was appointed botanist to the king, and tutor to the son of Buffon, with whom he visited foreign countries. After a considerable portion of his life had been given to botany, L. turned to zoology, and 1793 was made prof. of the nat. hist. of the lower classes of animals in the *Jardin des Plantes*. He rendered very important services to this branch of science. His greatest work is *Histoire des Animaux sans Vertèbres* (7 vols., Paris 1815-22; 2d ed. by Dëshayes and Milne-Edwards, Paris 1835; etc.). In *Philosophie Zoologique* (2 vols. Paris 1809), and some other works, he expounded speculative views, some of which, in new shapes, and as handled by recent naturalists, have profoundly influenced modern science. L. was one of the first to set forth the theory of the 'Variation of Species,' which was revived by Darwin, and forms such an important element in his theory (see DARWINIAN THEORY). L. was blind in his latter years as a result of small-pox.

LA MARMORA, *lâ-mâr'mo-râ*, ALFONSO FERRERO, Marquis DE: 1804, Nov. 17—1878, Jan.: Italian general and statesman. In 1816 he entered the military acad., which he left 1823 with the grade of lieut. in the artillery. He was speedily promoted to be adjt. major, and directed his special attention to the improvement of regimental gymnastics. In 1831, having obtained his captaincy, he set out on a tour of inspection of the great military establishments of Europe and the East. In 1845, he became major, and for his distinguished conduct in the national war of 1848, was decorated with the medal of valor. In 1849, he entered the cabinet as minister of war, withdrawing 1855, to assume command of the Sardinian troops in the Crimea, and at the close of the war was invested with the order of the Bath, and the grand cross of the Legion of Honor, and re-entered the ministry in his former capacity. He was active in the war of 1859, by which Lombardy was acquired by Italy; in 1861 was appointed commander-in-chief of the Italian army, and in 1864 prime minister. In the campaign against Austria 1866, he lost the battle of Custoza. Latterly he was intrusted with several diplomatic missions.

LAMARTINE.

LAMARTINE, *lâ-mâr-tên'*, ALPHONSE MARIE LOUIS DE PRAT DE: 1790, Oct. 21—1869, Mar. 1; b. Mâcon: French historian, poet, and statesman. In his *Memoirs of my Youth*, he has given us a touching account of the hardships of his family during the Reign of Terror. He was educated principally at the college of the Pères de la Foi, at Belley. On leaving college, he travelled in Italy. After the fall of Napoleon, he entered the army, which, however, he soon quitted, revisiting Italy in 1818. In 1820, appeared his *Méditations Poétiques*. The success of this work helped to open for him a diplomatic career. He was appointed *attaché* to the French embassy at Naples, and on his way thither married, at Chambéry, a beautiful and accomplished English lady, Miss Birch, whom he had met the year before in the valleys of Savoy. In 1823 appeared his *Nouvelles Méditations*, and in 1824 he became sec. of the legation at Florence. An unlucky expression which L. had used, descriptive of the Italians, in his *Dernier Chant de Childe Harold* (1825), led to a duel between him and Col. Pepé. Though L. was wounded, the result was not serious. In 1829 appeared the collection of *Harmonies Poétiques et Religieuses*. In the same year he was elected a member of the French Acad. After the revolution of 1830, having failed to procure a seat in the chamber of deputies, he set out 1832 to travel in the East. The death of his only daughter threw a gloom over this period of his life. Receiving news, when at Jerusalem, of his election by the constituency of Bergues, he returned to Paris. Though he soon became a noted speaker in the chamber, he still vigorously pursued his literary studies. In 1835, he published an account of his eastern travels. The *History of the Girondins*, which originally came out in journals, was, 1847, published complete in 8 vols. It had unquestionably much influence in bringing about the great events of the following year. When the revolution took place 1848, Feb., L. became a member of the provisional govt., and minister of foreign affairs, and exercised great influence over the first movements of the new republic. Ten departments elected him as their representative in the constituent assembly; he was also chosen one of the five members of the executive commission, and for some months had immense popularity; while his spirited and patriotic conduct, in crushing the mere anarchic insurrections of Apr. 16 and May 15 prevented great evils. Yet this was one of the principal causes of his downfall; the crowd became enraged, the assembly hostile, and the supreme power passed for a brief period into the hands of Cavaignac (q.v.). Though L. was nominated for the presidency, but few votes were recorded in his favor; and the *coup d'état* 1851, Dec. 2, sent him back to private life. From that time he gave himself almost wholly to literary pursuits. His *History of the Revolution* of 1848 had appeared 1849. It was followed 1851-2, by *History of the Restoration of Monarchy*

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in *France*; and 1854, by *History of Turkey*. He also contributed largely to several journals. In 1860, he undertook the publication of a complete ed. (41 vols.) of his works, revised and corrected by himself. He finished this labor 1866. In 1867 a pension was granted him by the government.

LAMASERY, n. *lā'ma-sér-ī*: in Thibet and Mongolia, religious society or congregation presided over by a lama (q.v.)

LAMASOOL, *lām'a-sôl*, or LAMB'S-WOOL: old English beverage, composed of ale and the pulp of roasted apples, with sugar and spices. The name is from the ancient British *La maes abhal*, the day of apples, because this beverage was drunk at a feast on the apple-gathering in autumn.

LAMB, n. *lām* [Icel. and AS. *lamb*; Sw. and Ger. *lamm*, a lamb: Esthon. *lamba*; Fin. *lampaan*, a lamb]: the young of the sheep: V. to bring forth young, as a sheep. LAMB'ING, imp. LAMBED, pp. *lāmd*. LAMB'KIN, n. *-kīn*, a little lamb. LAMB-LIKE, gentle; innocent. LAMB-SKINS, n. plu. skins of lambs dressed with the fleece on, and often variously colored. LAMB OF GOD, a title of the Savior. TUP-LAMB, *tūp-* or *tūp-*, a male lamb. EWE-LAMB, a female lamb. *Note*.—The castrated *tup* is a *wether* or *hogget*; the *weaned she-lamb* is a *ewe-hogget*; the *hogget* is called a *shearling* after its first shearing; a *female sheep* after its first lamb is a *ewe*.

LAMB, Lady CAROLINE: see MELBOURNE, WILLIAM LAMB.

LAMB, *lām*, CHARLES: English essayist and critic: 1775, Feb. 10—1834, Dec. 27; b. in Crown Office Row, Inner Temple, London. He received his education at Christ's Hospital, where he had Coleridge for a school-fellow. With Coleridge, Wordsworth, Hunt, Hazlitt, and other distinguished men of his time, he lived in affectionate intimacy. In 1792, he became a clerk in one of the departments of the India House; and in 1825 he was allowed to retire with a pension of about £450 granted by the directors. His first poems appeared in a small vol., in which venture Coleridge and Lloyd were his partners. In 1801, he published *John Woodvil*, a drama, in which he looks upon man and nature with the eye of an Elizabethan. His *Essays of Elia* were originally published in the *London Magazine*. L. was never married; he lived with an only sister, Mary Anne L., who was subject to insane fits—in one of which she killed her mother—and for whom L. cherished the tenderest affection, watching over her with assiduous care. He died in London. Mr. Justice Talfourd published 2 vols. of his *Letters*, supplemented 1848 by the *Final Memorials*, in which, for the first time, the world became acquainted with the story of his sister Mary. Mary had a literary taste, and some gift in writing; she composed with her

LAMB—LAMBALLE.

brother, *Mrs. Leicester's School*, and *Tales from the Plays of Shakespeare*.

The poems of L. were never widely read; his reputation rests entirely on his criticisms and his *Essays*. The critical remarks appended to his *Specimens of English Dramatic Poems* are of the highest value, while his *Essay on the Genius of Hogarth* is considered by many the finest critical paper in the language. In the qualities of grace, quaintness, and a certain tenderness of humor, 'a smile on the lip, and a tear in the eye,' the *Essays of Elia* are unique; the author is reflected in them with all his whims, his wit, his poetic instinct, his charity, and his odd ways. See Ainger's *Lamb* (1882).

LAMB, JOHN: 1735, Jan. 1—1800, May 31; b. New York: soldier. He was associated with his father as optician and manufacturer of mathematical instruments; took part in Montgomery's expedition against Quebec and the chief military movements in N. Y. in the early portion of the revolutionary war; was col. of artillery under Gen. Knox; and served with credit to the close of the war. After the war he became a member of the N. Y. legislature, and collector of customs at New York.

LAMB, MARTHA JOANNA READE (NASH): historian: b. Plainfield, Mass., 1829, Aug. 13. She received a superior English education and became an accomplished linguist; was married to Charles A. Lamb 1852; was a founder of the Home of the Friendless and Half-orphan Asylum, and sec. of the sanitary commission fair in Chicago 1863; settled in New York and engaged in literary work 1866; and became editor of the *Magazine of American History* 1883. She has published numerous juvenile and historical works, notably *History of the City of New York*, 2 vols. (1866-81), and is a member of many historical societies in Europe and America.

LAMB, WILLIAM, Lord MELBOURNE: see MELBOURNE.

LAMBALLE, *lông-bâl'*, MARIE THÉRÈSE LOUISE DE SAVOIE-CARIGNAN, Princesse DE: victim of the French Revolution: 1749, Sep. 8—1792, Sep. 3; b. Turin; daughter of Prince Louis Victor Amadeus of Carignan. She was very beautiful and amiable, and was married, 1767, to Louis Alexander Joseph Stanislaus de Bourbon, Prince of Lamballe, who soon died, a victim of debauchery. The princess became the intimate friend and chosen companion of Marie Antoinette. At the time of the attempted flight of the king and queen, she sought refuge in England, but returned to them 1792, Feb. After the events of Aug. 10 she received permission to share the captivity of the queen, but was soon separately immured in the prison of La Force, Sep. 3 was brought before the tribunal, and commanded to swear that she loved liberty and equality, and hated the king, the queen, and royalty. 'The first oath,' she replied, 'I will swear, but the rest I cannot: my heart rebels against it.' Many of those who stood by were anxious that she should escape, but

LAMBAYEQUE—LAMBERT.

she did not hear the advices which they addressed to her. 'Let madame go!' said the president at last; and at this signal of death, by being delivered to the fury of the populace, two men conducted her to the door, where she received a stroke of a sabre on the back of her head, when blood spouted up, and her long hair fell down. On receiving a second stroke, she fell, and the mob of murderers tore her body to pieces, placed her head and heart upon pikes, and paraded them before the windows of the Temple, where the royal family were confined.

LAMBAYEQUE, *lām-bī-ā'kā*: town of Peru, in the dept. of Libertad, near the mouth of the river Lambayeque, 425 m. n.w. from Lima. It is about 5 m. from the sea; but has some trade, though its roadstead is very bad, and fully a m. from the shore. L. has a church and several chapels. It has manufactures of cotton fabrics. Pop. 8,000.

LAMBDOIDAL, a. *lām-doyd'āl*, or LAMB'DOID, a. *-doyd* [from Gr. letter (Λ) lambda, and *eidos*, shape]: having the form of the Greek letter Λ; in *anat.*, applied to one of the cranial sutures.

LAMBEAUX, *lām-bō'*: a cross, in heraldry; formed in the upper like a cross pattee, but with the lower limb not widened, but terminating in a label of three points, 'having,' according to Sylvanus Morgan, 'a great deal of mystery in relation to the top, whereon the first-born Son of God did suffer, sending out three streams from his hands, feet, and sides.



Lambeaux.

LAMBENT, a. *lām'bēnt* [L. *lamben'tem*, licking]: playing about like flames; touching lightly; gliding over.

LAMBERT, *lām'bērt*, JOHANN HEINRICH: 1728, Aug. 29—1777, Sep. 25; b. Mühlhausen, Upper Alsace: philosopher and mathematician. He was son of a poor tailor; but his talents and application to study having gained him friends, he obtained a good education, and made remarkable progress in mathematics, philosophy, and oriental languages. He obtained a situation as clerk in an office, and gradually rose, till Frederick the Great, 1764, summoned him to Berlin, and made him a member both of the Council of Architecture and the Acad. of Sciences. He died at Berlin, leaving the renown of the greatest analyst in mathematics, logic, and metaphysics that the 18th c. had produced. He was the first to lay a scientific basis for the measurement of the intensity of light, in his *Photometria* (Augsb. 1760), and he discovered the theory of the speaking-tube. In philosophy, and particularly in analytical logic, he sought to establish an accurate system by bringing mathematics to bear on these subjects, in his *Neues Organon, oder Gedanken über die Erforschung und Beziehung des Wahren* (2 vols. Leip. 1764). Of his other works, we may mention his *Kosmologische Briefe über die Einrichtung des Weltbaus* (Augsb. 1761), and his correspondence with Kant.

LAMBERT—LAMBETH.

LAMBERT, *lăm'bért*, JOHN: English parliamentary general: 1619, Sep. 7—1692; b. Kirkby-Malhamdale, Yorkshire. On the outbreak of the civil war he became a captain under Fairfax. He fought at Marston Moor, at Naseby, in Scotland, and at Worcester, but did not acquire importance till after the death of the great Protector, when he became the head of the cabal of malcontent officers who overthrew the feeble administration of Richard Cromwell. L. was now deemed the leader of the Fifth Monarchy or extreme republican party; he suppressed, with considerable vigor, the royalist insurrection in Cheshire, 1659, Aug.; and two months afterward, dismissing the remnant of the Rump Parliament, virtually governed the country with his officers under the title of the 'Committee of Safety.' For a brief period, his position was considered so important that Charles II. was advised to make terms with him by marrying his daughter. The counterplot of Monk, however, frustrated all his designs; and Apr. 22 he was taken prisoner by a Col. Ingoldsby, tried 1662, and banished to the isle of Guernsey, where he died.

LAMBERTVILLE, *lăm'bért-vīl*: city in Hunterdon co., N. J., on the Delaware river and the Belvidere div. of the Pennsylvania railroad; 14 m. above Trenton, 44 m. from Philadelphia, 71 m. from New York. It has excellent water power for its manufactures, which comprise rubber, iron foundry products, cotton, paper, rope and twine, flour, lumber, and railroad cars. It contains 5 churches, graded public schools, 2 national banks, (cap. \$172,000), and 2 newspapers. It was named after Gov. John Lambert (1748–1823). Pop. (1870) 3,842; (1880) 4,183; (1885) 4,067.

LAMBESSA, *lăm-bēs'sa*, or **LAMBÈSE**, F. *lōng-bāz* (anc. Lambæsa, native *Tazzut*): small modern village in n. Africa, in the French province of Constantine (anc. Numidia). The anc. city on this site originated as the camp of the third legion in the time of Hadrian. It was a place of wealth and importance, with pop. about 50,000. After the 4th c. it declined. Extensive and imposing ruins of great interest remain, rich in inscriptions (see *Corpus Inscr. Lat.* VIII.).—The modern L. is a French penal colony with a large and strong prison.

LAMBETH, *lăm'béth*: parliamentary borough of England, county of Surrey, forms a great part of the s.w. quarter of London; area, 8,840 acres. Besides L. Palace, official residence of the archbishops of Canterbury for several centuries, it contains Astley's Theatre, the site of the once famous Vauxhall Gardens, and the Surrey Zoological Gardens. It returns two members to the house of commons. Pop. (1871) 379,048; (1881) 498,967.

LAMBETH ARTICLES—LAME.

LAMBETH ARTICLES: Calvinistic symbol, intended as an appendix to the 39 articles of the Anglican Church; adopted by a conference called by the Abp. of Canterbury at Lambeth, and approved by him 1595, Nov. 20. A discussion on predestination had arisen at Cambridge Univ.—Prof. Cartwright and Dr. Whitaker, Regius prof., with others, favoring the high Calvinistic view which some as strongly opposed. The Calvinist party, led by Whitaker, drew up articles which they submitted to Abp. Whitgift, who summoned for consultation some of the bishops, with Tyndall, dean of Ely, and other learned men, including the Cambridge divines. The result was the L. A., nine in number, the same submitted by Whitaker, though slightly softened. Queen Elizabeth, offended at such a step taken without her permission, severely censured the abp. and ordered the suppression of the articles. In 1604, Dr. Reynolds presented the L. A. at the Hampton Court Conference (q.v.), requesting the addition of them to the 39 articles. The L. A. are of value only as a theological curiosity, but their adoption is of great interest as a historical land-mark showing the strength of Calvinism in the Anglican Church of that day. The following extracts show their tenor: '1. God from eternity predestinated certain persons unto life, and reprobated certain persons unto death.' '2. The moving cause of predestination to life is not the foresight of faith, . . . but the alone will of God's good pleasure.' '3. The predestined are a predetermined and certain number, which can neither be lessened nor increased.' '7. Saving grace is not allowed, is not imparted, is not granted to all men, by which they may be saved if they will.' '8. . . . all men are not drawn by the Father that they may come to His Son.' '9. It is not in the will or power of every man to be saved.'—For once, at least, the queen's arbitrary interference, which so often damaged the church in England, seems to have wrought for saving it from too strict a regulation of the eternal Divine government, which, however well-meant, involved a denial of God's grace revealed in Scripture.

LAMBREQUIN, *lām'bér-kīn*: term used in heraldry in three senses: 1. The mantling attached to the helmet, and represented as depending over the shield (see **MANTLING**); 2. A wreath (q.v.); 3. The point of a label: see **LABEL**.—The word designates also a short curtain or decorated draping depending from a window cornice, or from a mantel.

LAMB'S LETTUCE: see **CORN SALAD**.

LAME, a. *lām* [Dan. *lam*, weak, palsied: Icel. *lami*, enfeebled, impaired; *lama*, to bruise, to weaken: Ger. *lahm*, lame]: disabled in a limb, especially a leg; imperfect; not satisfactory, as a reason or excuse: V. to make lame; to cripple or disable, especially in the legs. **LA'-MING**, imp. **LAMED**, pp. *lāmd*. **LAME'LY**, ad. *-lī*, in a

LAMEGO—LAMELLICORNES.

lame manner; like a cripple. LAMENESS, n. *lām'nēs*, state of being lame; an impaired or weakened state of a limb. LAMISH, a. *-ish*, rather lame. LAME DUCK, a slang term, applied to a member of the stock exchange who has failed to meet his engagements.

LAMEGO, *lā-mā'gō*: old town of Portugal, province of Beira, amid rocky mountains on an affluent of the Douro, about 3 m. from that river, and 46 m. e. of Oporto. It contains a Gothic cathedral and a bishop's palace; and there are ancient remains, both Roman and Moorish. Pop. 9,000.

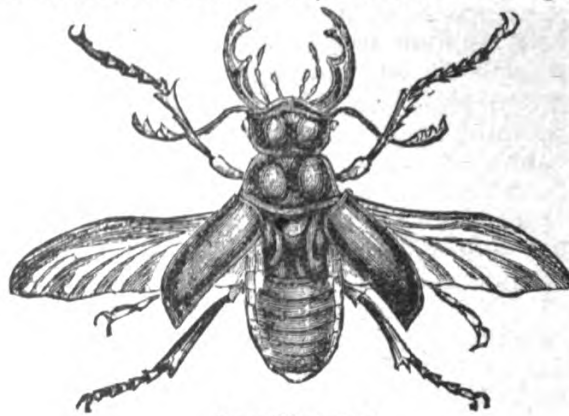
LAMELLA, n. *lā-mēl'lā*, LAMEL'LÆ, n. plu. *-lē* [L. and It. *lamella*; F. *lamelle*, a small plate of metal—from L. *lamīna*, a plate, a leaf]: thin plates or scales, as those composing certain shells or parts of fungi, or which are appended to the corolla of certain plants; in *bot.*, the gills of an agaric. LAMEL'LAR, a. *-lēr*, consisting of or disposed in thin plates or scales. LAM'ELLARLY, ad. *-lī*. LAMELLATE, a. *lām'ēl-lāt*, or LAM'ELLATED, a. composed of very thin plates or scales; foliated.

LAMELLIBRANCHIATE, a. *lām'ēl-lī-brāng'kī-āt* [L. *lamella*, a small plate of metal; Gr. *branchia*, gills]: having gills in symmetrical layers, as the bivalve mollusks. LAM'ELLIBRANCHIA'TA, n. plu. *-brāng-kī-ā'tā*, class of acephalous mollusks, all of which have bivalve shells (see BIVALVES), and which respire by gills in the form of vascular plates of membrane attached to the inner surface of the mantle. Oysters, cockles, and mussels are familiar examples. The *adductor* muscle, which closes the shell, is single in some, double in the greater number. More important differences exist in the powers of locomotion possessed by some, and denied to others. Thus, oysters are fixed to one spot by one of the valves of the shell; but most of the L. have the power of moving by swimming, leaping, or burrowing in sand, sometimes in more than one of these ways, being provided for this purpose with a fleshy muscular organ called the *foot*. Some, as mussels, when they have found a suitable place, fix themselves there by a *Byssus* (q.v.). The mouth of the L. is jawless and toothless, and all seem to depend for their food on the currents of water continually brought by the ciliary action into the mouth. They all seem more or less sensible to light, and numerous small red spots on the edge of the mantle of some are supposed to be eyes. They have organs of hearing, and labial tentacles, which are supposed to exercise the sense of smell.

LAMELLICORNES, *lā-mēl-lī-kawr'nēz*: very numerous family of coleopterous insects, section *Pentamera*, containing the largest of the beetles, as well as many species remarkable for peculiar conformations of the head and thorax. The three last joints of the antennæ are flattened into lamellæ, disposed sometimes like leaves of a fan, sometimes like teeth of a comb. Many

LAMELLIFEROUS—LAMENNAIS.

of the L. feed on decaying animal or vegetable matter, but some on leaves or flowers; the latter are generally



Lamellicornis:
Stag-Beetle (*Lucanus cervus*).

of brilliant metallic colors; the former, black or brown. The larvæ are soft, cylindrical, with six small legs, and the body always curved. Dung-beetles, stag-beetles, cock-chafers, etc., belong to this family.

LAMELLIFEROUS, a. *lăm'el-îf'ér-üs* [L. *lamella*, a small plate of metal; *fero*, I bear]: having a foliated structure.

LAMELLIFORM, a. *lăm-ël'î-fawrm* [L. *lamella*, a small plate of metal; *forma*, shape]: having the form of a scale.

LAMELLIROSTRAL, a. *lăm'el-î-rös'träl* [L. *lamella*, a small plate of metal; *rostrum*, a beak]: having the margins of the beak furnished with plates, as in the duck and goose. LAMELLIROS'TRES, in the system of Cuvier, large group of web-footed birds (*Palmipedes*), distinguished by a thick bill having tooth-like *lamellæ* at its edges, apparently more for the purpose of straining water from the food than of masticating or comminuting it. The *Anatidæ* and *Mergidæ* (ducks, swans, geese, goosanders, and mergansers) constitute the group.

LAMENNAIS, *lâ-mâ-nâ'*, HUGUES FÉLICITÉ ROBERT DE: celebrated French politico-religious writer: 1782, June 6—1854, Feb. 27; b. St. Malo; of a family engaged in the shipping trade. With the exception of some instruction in Latin from his elder brother, L. was, owing to the revolutionary troubles, almost entirely self-taught. His early turn of thought was strongly religious, as well as literary; and resisting all his father's efforts to fix him in commercial life, he received an appointment as teacher of mathematics in the college of his native town, 1807. His first work, published in the next year, *On the State of the Church in France during the 18th Century*, is in a strain of high orthodoxy against the materialistic philosophy of the 18th c. which still held influence in literature. A few years later—having taken the clerical tonsure—L. produced, with his brother, a treatise *On the*

LAMENNAIS.

Tradition of the Church on the Institution of Bishops, which arose out of the conflict of Napoleon with the Holy See as to the affairs of the church in France. During the Hundred Days, he fled to England, where he was received by the celebrated Abbé Caron; and on his return to France, he entered the seminary of St. Sulpice, where he received priest's orders 1816. A year afterward, he published his most celebrated work on the side of orthodoxy, *An Essay on Indifference in Religion*, a work of exceeding acuteness, and of great learning and brilliancy. In this work he pushed the claim of authority to such a length, and made all reasoning resolve itself so completely into authority, that even those who agreed in his conclusion, were not surprised at the recoil by which his mind once abandoning this principle of authority, in his after-conflict with the church, rushed into the opposite extreme of unlimited unbelief. The celebrity which this work won for L. led to a design on the part of Pope Leo XII. to promote him to the cardinalate—an honor which L. is said to have refused. L.'s political views, from the first moment of the Restoration, had been liberal. Nevertheless, he joined himself to a powerful and active section of the most distinguished members of the royalist and church party—Chateaubriand, De Bonald, Frayssinous, and others, whose organ was a journal, the *Conservateur*, and afterward the *Defenseur*, and the *Drapeau Blanc*; but L. rapidly outstripped the views of most of his colleagues. He was fined 1824 for a work *On the Relations of Religion and Politics*. After the revolution of 1830, while he adopted in its fullest sense the doctrine of the sovereignty of the people, he continued a zealous adherent of the faith of the church; and, with a number of ardent young friends, all of whom subsequently rose to distinction in their various lines—Montalembert, Lacordaire, Gerbet, and others—he established a journal, *L'Avenir*, aiming to reconcile liberty and religion. The doctrines of this journal on the separation of church and state and on many other popular topics, gave grave offense to the ecclesiastical authorities. They were censured by Pope Gregory XVI. 1832; and L., in obedience to the papal sentence, discontinued his journal, and professed his future submission to authority; but from this date his opinions underwent a rapid change, and in a work which he published 1834, and which obtained an immediate and unprecedented popularity in France, *Paroles d'un Croyant*, proclaimed his complete and irreconcilable rupture with the church of which he had long been the champion. The work was immediately condemned at Rome; but it passed in France through innumerable editions, and was translated into all the languages of Europe; and the author's reply to the papal condemnation was in a still more pointedly aggressive work, 1836, *Affaires de Rome*. With his characteristic impetuosity, he now threw himself into the arms of the opposite party. His successive publications,

LAMENT—LAMENTATIONS.

The Book of the People (1837), *The Country and the Government* (1840), *On Religion* (1841), *The Guide of the First Age* (1844), *A Voice from Prison* (1846), were but so many new utterances of extreme democratic principles. The revolution in his religious sentiments was equally decisive and complete; he ceased to be not merely a Romanist, but even a believer. In his last illness, he declined all ministrations of the church, and at his death, he gave directions that his interment should be without funeral rites. He also directed, by his will, that certain papers which he left ready for press should be published without alteration; and on the refusal of his niece to surrender these papers, a suit-at-law was instituted, which terminated in an order for the surrender of the papers; and his *Posthumous Works* were published accordingly 1855-59. The most elaborate work of L.'s latter period is his *Esquisse d'une Philosophie* (4 vols. 1840-46).

LAMENT, v. *lă-měnt'* [F. *lament*, to bewail—from L. *lamentāri*, to lament, or bewail: L. *lamentum*, a mournful cry: It. *lamentare*]: to utter a mournful cry; to grieve; to weep or wail; to bewail; to mourn for: N. sorrow audibly expressed; an expression of sorrow; lamentation. LAMENT'ING, imp.: N. a mourning; lamentation. LAMENT'ED, pp. a. bewailed; mourned for. LAMENT'ER, n. -*er*, one who. LAMENTATION, n. *lăm'ěn-tă'shŭn* [F.—L.]: sorrow or grief audibly expressed; outcry. LAMENTABLE, a. *lăm'ěn-tă-bl* [F.—L.]: to be lamented; mournful; expressing sorrow; pitiful. LAM'ENTABLY, ad. -*blĭ*, with expressions or tokens of sorrow; so as to cause sorrow; pitifully. LAMENT'INGLY, ad. -*lĭ*.—SYN. of 'lament, v.': to deplore; mourn; complain; murmur; repine; regret.

LAMENTATIONS OF JEREMIAH (*Megillath Echa*; lxx. *Thrēnoi*): one of the canonical books of the Old Testament, containing laments over the desolation of the land, the exile of the people, the destruction of the first temple, the fall of the kingdom of Judah, and the writer's own woes. These laments, five in number, are closely connected in their subject matter; but diversity of opinion exists concerning their artistic relation to each other. Some, as De Wette, Ewald, and Keil, have tried to show that they are really parts of one poem; others, as Eichhorn and Bertholdt, that they were originally quite independent and isolated elegies; while a third party, as Lowth and Davidson, hold that there is a certain pervading harmony of sentiment and idea, indicating, probably, that they were composed by the poet-prophet under the same condition of religious feeling. The structure of the laments is very artificial. Most critics are satisfied, from internal evidence, that the tradition which makes Jeremiah their author is worthy of credence, and that they were all written by him shortly after the destruction of Jerusalem.

LAMIA—LAMINITIS.

LAMIA, n. *lă'mî-ă* [L. supposed to be the feminine form of *Lamus*, King of the Læstrygones]: a kind of fiend in some ancient mythology, under the form of a beautiful woman, prototype of the modern vampire: a witch; a hag.

LAMINA, n. *lăm'î-nă*, **LAM'INÆ**, n. plu. *-nē* [L. *lamīnă*, a plate, a leaf]: a thin plate or scale; a thin layer or coat lying over another; in *bot.*, the blade of a leaf; the broad part of a sepal or petal. **LAM'INAR**, a. *-nēr*, consisting of, or resembling, thin plates or scales. **LAM'INATE**, v. *-nāt* [mid. L. *laminātus*, laminated]: to form into thin plates: **ADJ.** formed of thin plates disposed one over another; plated. **LAM'INATING**, imp. **LAM'INATED**, pp.: **ADJ.** consisting of plates or layers disposed one over another; applied to strata splitting up into thin layers. **LAM'INABLE**, a. *-nă-bl*, capable of being beaten or rolled into plates. **LAM'INA'TION**, n. *-nă-shŭn*, state of being laminated; condition which allows of cleavage in one direction only; natural arrangement of rocks of a large proportion of the earth's strata in thin layers or laminæ. Shale deposits exhibit this structure very plainly, being frequently easily separable into the thin laminæ in which they were originally deposited. Shale is the fine sediment that settles at the bottom of some tranquil or slightly moving water. The laminæ indicate interruption in the supply of the materials, which may have been occasioned by successive tides, by frequent or periodical floods, or by the carrying medium having access to a supply of different material, passing, e.g., from mud to sand, and back again to mud. The laminæ of the brick-clay deposits are separated, in many places, by the finest sprinkling of sand, almost invisible in the vertical sections. The layers are occasionally obvious, from their being of different shades of color, often produced by the bleaching of the layers when they were deposited; but frequently the various laminæ of a bed are so united, and the bed so homogeneous, that except when the face is exposed to weathering, the laminated structure is not visible. This condition seems to have resulted from the shortness of the interruptions in the deposit not permitting the solidification of any of the layers until all was deposited, when the whole set cohered together as a single bed. **LAMINARIAN**, a. *lăm'î-nă'rî-ăn*, pertaining to sea-weeds of the genus **LAM'INA'RIA**, *-rî-ă*; pertaining to that belt or zone of marine plant-life which commences at low-water mark, and extends to a depth of from 40 to 90 ft. (see **TANGLE**). **LAM'INARITES**, n. plu. *-năr-îtz*, in *geol.*, broad-leaved fossil algæ. **LAM'INIF'EROUS**, a. *-nîf'ēr-ŭs* [L. *fero*, I bear]: having a structure consisting of plates or layers.

LAMINI'TIS: see **FOUNDER**.

LAMMAS—LAMMERGEIR.

LAMMAS, n. *lām'mās* [AS. *hlafmæsse*, the loaf mass or feast—from *hlaf*, a loaf; *mæsse*, a mass—*lit.*, the loaf mass]: offering of the first-fruits of the harvest on Aug. 1—so named because a loaf of bread was offered: the first day of August, called also **LAMMAS-DAY** or **LAMMAS-TIDE**, one of the cross quarter-days, or half-quarter days, in England, being the feast of St. Peter ad Vincula. In Scotland, it is the practice with farmers to pay the half year's rent due at Whitsunday on Lammas-day.

LAMMERGEIR, or **LAMMERGEYER**, n. *lām'ér-gīr* [Ger. *lammergeier*—from *lamm*, a lamb; *geier*, a vulture], (*Gypaetos barbatus*): large bird of prey, called also **BEARDED VULTURE**, **BEARDED GRIFFIN**, and **GIER-EAGLE**. It is the only known species of a genus which



Lammergeier (*Gypaetos barbatus*).

forms a connecting link between vultures and eagles, though commonly ranked among the *Vulturidae*, to which it approaches most nearly. The full-grown L. is of a shining brownish black on the upper parts, with a white stripe along the shaft of each feather; the head is whitish, with black stripes at the eyes; the neck and under-part of the body are rusty yellow. It is 4 ft. high when sitting; nearly 5 ft. long; and 9 to 10 ft. in expanse of wing. It is very bold and rapacious, swooping down on hares, lambs, young goats, chamois, etc., and some times carrying off children. It lives on animals newly killed, eating carrion only when pressed by necessity. It was once common in the Alps, but is now rare. It is

LAMMERMOORS—LAMORICIÈRE.

found also in the Pyrenees, and in the mountains of Asia, S. America, and n. Africa, and soars high above the loftiest peaks.

LAMMERMOORS, *lām-ēr-môrz'*: range of low hills in Scotland, running e.n.e. for one half of their length on the boundary-line between E. Lothian and Berwickshire, the other half lying in the s.e. corner of E. Lothian and forming, where it meets the German Ocean, a bold, rocky, and dangerous coast. The L. send off several minor ranges southward into Berwickshire. The highest hills are Lammer Law (1,728 ft.) and Spartleton (1,534 ft.).

LAMNA, n. *lām'nā*, plu. LAMNÆ [L. *lamna*, a thin plate; or Gr. *lamnē*, a large sea-fish]: group of sharks having thin, sharp, plate-like teeth, sigmoidally curved and not serrated: it includes the mackerel shark or green-back shark, and the *man-eater* of American coasts. LAMNIDÆ, family of sharks, including *Lamna* and *Car-charodon*.

LA MONTAIGNE, *lâ mōn-tān'*, F. *lâ mōng-tāñ'*, JOHANNES: b. France: physician. He emigrated to New Amsterdam a short time prior to the arrival of Director Wilhelm Kieft (1638, Mar. 28), and was appointed by the director his councilor. When Kieft determined to make war on the Indians, L. joined Dominie Bogardus in warning him against the scheme; but the director was immovable, and many Indians at Pavonia and Corlaer's Hook were massacred in their sleep by Kieft's orders 1643, Feb. 25. In 1644 L. was one of three commanders of the expedition appointed to exterminate the Canarsee Indians on Long Island, and witnessed the flaying alive of one of two prisoners taken to Fort Amsterdam. In 1645, May, he was one of the signers of the treaty with the Indians, and 1652 after Director Stuyvesant had established a municipal govt., he was appointed teacher of the first school.

LAMORICIÈRE, *lâ-mo-re-se-är'*, CHRISTOPHE LÉON LOUIS JUCHAULT DE: French general: 1806, Feb. 5—1865, Sep.; b. Nantes. He studied at the École Polytechnique, and after the revolution of 1830, went to Algeria as lieut. of engineers. In 1833, he became chief of the battalion of Zouaves; 1835, lieut.col.; 1837, col. He particularly distinguished himself at the siege of Constantine. In 1843, he was appointed gen. of division; in the following year, commander of the Legion of Honor; and 1845, interim-gov. of Algeria. To him belongs the glory of concluding the war in Africa, where he had made no fewer than 18 campaigns, by forcing Abd-el-Kader to surrender 1847. On the outbreak of the revolution 1848, Feb., he nearly lost his life in endeavoring to proclaim the regency of the Duchess of Orleans. In 1848, June, he commanded the attack on the barricades, and quelled the anarchic tumults of the Socialists. He was war-minister during the govt. of

LA MOTTE FOUQUÉ—LAMOV.

General Cavaignac, to whose republican party he afterward attached himself in the legislative chamber; but being a very decided opponent of the schemes of Louis Napoleon, he was arrested on the occasion of the *coup d'état* of 1851, Dec. 2, and at first imprisoned in Ham, but afterward conveyed out of France and set at liberty. During his exile in Germany, Belgium, and England, the great soldier became *devout*, as his countrymen phrase it; and when the Italian war of independence threatened the safety of the pope, L. proceeded to Rome 1860, and was appointed by Pius IX. commander of the papal troops. He was compelled to surrender with his whole force to the Sardinian general, Cialdini, at Ancona.

LA MOTTE FOUQUÉ: see FOUQUÉ.

LA MOTTE-VALOIS, *lâ mot-vâ-lwâ'*, JEANNE DE LUZ DE ST. RÉMY, Comtesse DE: 1756-91; b. Champagne, France; irregularly descended from Henry II.: adventuress, who married a knavish Count de La Motte: see DIAMOND NECKLACE.

LAMOV, *lâ-môv'* (or LOMOV, *lo-môv'*), NIJNI, *nîzh-ně'* (New, or Lower L.): town in European Russia, govt. of Penza, on the river Lamov, branch of the Mokscha, which itself is, through the Oka, a feeder of the Volga. It is 9 m. s.w. of Verknii Lamov; has three churches, and an annual fair which attracts traders from all parts of Russia. Pop. (1881) 18,580.

LAMOV, VERKNI (Old, or Upper L.): town in European Russia, about 64 m. w.n.w. from Penza. It has seven churches. Pop. (1880) 8,414.

LAMP.

LAMP, n. *lāmp* [F. *lampe*—from L. and Gr. *lampas*, a torch—from Gr. *lampō*, I shine]: an article for containing oil and a wick to give light; any contrivance for giving light. **LAMP'LIGHT**, n. *-līt*, the light given by a lamp. **LAMP'LIGHTER**, n. *-līt-ēr*, the person employed to light the gas lamps. **LAMP'IC**, a. *-īk*, of or from a lamp; denoting the acid called also aldehydic acid. **LAMP-BLACK** (see below). **LAMP-SHELL**, a bivalve, deep-water shell-fish, so called from its shape (see that title). **SAFETY-LAMP** (see that title).—*Lamps* in the most primitive ages were probably skulls of animals, in which fat was burned; and certain sea-shells formed admirable lamps for those to whom they were attainable. To this day, there may occasionally be seen suspended in the cottages of Zetland, shells of the 'roaring buckie' (*Fusus antiquus*: see **FUSUS**), perhaps the most ancient kind of lamp now in use.

When pottery and metal began to be used, the principle of these natural lamps was long retained, as seen in ancient Egyptian, Greek, and Roman lamps (fig. 1), and in the stone cups and boxes of northern nations. The invention of lamps has been attributed to the Egyptians, but it is far more probable that they received it from the



Fig. 1.

older civilization of India. Herodotus (ii. c. 62) reminds us of the Chinese feast of lanterns, by speaking of the feast of lamps at Saïs, in Egypt. Such lamps as that in fig. 1 were called *lychna* by the Greeks, and *lucernæ* by the Romans, and various modifications of the form are frequently found in the ruins of Greek and Roman cities; considerable numbers have been obtained from the excavations of Tarsus and of Pompeii and Herculaneum. The principle in all is the same. At first, these *lucernæ* were made of unglazed pottery, and only with one wick-hole; but better material and more elaborate forms were introduced, and their light-giving power was increased by their being made to hold several wicks, from two to twelve. The wick in this lamp was generally made of flax-tow, sometimes, however, of rushes and other vegetable fibres.

Among the northern nations of antiquity, lamps were in use, but the difference of climate necessitated a different kind of lamp. The limpid oils of the present day were unknown to our Celtic and Saxon forefathers; besides, the cold winters would have solidified them, and they would not have been drawn up by the wick, if ar-

LAMP.

ranged as in the old Roman and Greek *lucernæ*. The solid fat of various animals was their chief illuminating material, except on the sea-coast, where seal and whale oil occasionally helped them. Small, open stone pots, afterward exchanged for metal, were used, and being partly filled with grease, a wick was thrust down through the middle, and being lighted, consumed the fat as it melted. Stone cups of this kind are occasionally dug up in Scotland and elsewhere: in principle, they are the same as the *padelle*, used in Italian illuminations, and the old grease-pots, which formed the foot-lights of theatres not many years since, and which are still occasionally seen in travelling-shows at country fairs. The Esquimaux form square boxes of soap-stone, and use them in the same way.

No great improvement took place in the construction of lamps until the beginning of the present century. Taste had been shown in the designs, but the principle remained the same; a wick sucking up oil from the reservoir of the lamp to supply itself during the combustion, and nothing more, if we except the improvement effected by the invention of M. Argand 1784; see ARGAND. In 1803, M. Carcel, another Frenchman, made an excellent improvement on the lamp by applying clock-work, which acts by raising the oil through tubes in connection with the wick, so that the wick is kept soaked. If properly managed, this is perhaps the best of all oil-lamps, as it will keep a well sustained and brilliant light for seven or eight hours, and the light rather increases than otherwise as the lamp burns and becomes warmer, thereby rendering the oil more limpid. But the Carcel lamp has two disadvantages; it is expensive, and is easily disarranged, therefore it has never become common.

The French moderator lamp is much simpler, and appears to overcome the difficulties of the case. The body of this lamp consists of a cylinder or barrel, the lower part of which contains the store of oil. On the top of the oil rests a piston, which is constantly pressed down by a spiral spring, situated between it and the top of the barrel. Through the piston is inserted a small tube, which passes up to the burner at the top; and the pressure of the spring on the piston causes a constant stream of oil to rise through this tube and feed the wick. What is not consumed flows over the burner, and back into the barrel above the piston. It is above the piston also that fresh oil is introduced. When the piston has reached the bottom, it is wound up again by a rack and pinion, and a vacuum being thus formed, the oil above it is forced to the under side through a valve kind of contrivance round its edge.

It is obvious that in this machine the flow of oil will be greatest when the piston has been newly wound up, and the spring is at its greatest tension. This inequality is regulated, or *moderated*—hence the name of the lamp

LAMP.

—by an extremely ingenious contrivance, which narrows the passage for the oil when the pressure is strongest.

The introduction of mineral oils—known under the various names of paraffine oil, petroleum, kerosene, naphtha, shale oil, etc.—has in a great measure superseded the use of animal and vegetable oils for lighting purposes. The great recommendation of mineral oils is their cheapness. One great difficulty with them at first was that, without careful preparation, they are apt to give off inflammable vapors at a low temperature, which give rise to dangerous explosions. This has been obviated by processes of rectification which make riddance of the lighter and more volatile ingredients. An oil that gives off an inflammable vapor at a temperature under 120° F. cannot be considered safe. Paraffine oil from Boghead coal will not form an explosive mixture under 140° F. Law now deals with this matter by making it illegal to store or issue oil forming an inflammable mixture under a certain number of degrees of temperature. Another difficulty was to make the oil burn without smoke. The kind of lamp found to effect this purpose best was introduced into Great Britain from Germany about 1856, and, with minor improvements, the form is still adhered to. The body of the lamp is a globular-shaped reservoir of glass or stoneware for the oil, mounted on a foot or pedestal; into this a brass wick-holder is screwed, the wick being raised or lowered by means of a rack and pinion. The lamp now in common use has a dome-shaped cap surrounding the wick-tube, and having a slit running across it, through which the flame issues. A long glass chimney rests on a ledge or gallery around the base of the cap; and by perforations in the brass an air-chamber is formed below. The chimney causes a strong draught through this chamber, and the cap or dome deflects the current of air, and makes it impinge against the flame as it passes through the slit, thus producing perfect combustion and a white, brilliant light without smoke. The demand for these lamps has become so great, that the manufacture and sale of them forms an extensive business.

A great drawback in the use of the common L. has been the expense and annoyance attendant on the frequent breakage of the glass chimney. To obviate this, a smokeless lamp has been introduced, which dispenses with the glass chimney altogether. Instead of it, a second cap or dome is placed over the ordinary one, leaving a narrow space between the two. As the two cones become hot, a powerful draught is created, and two separate currents of air are directed against the flame, one by the lower cap, as in the ordinary lamp, and the other from between the two caps. The result is perfect combustion, without a chimney. A large glass globe is used to protect the flame from currents of air, as well as to disperse and soften the light. Such a globe is often used

LAMPASS—LAMPEDUSA.

with the ordinary lamp in addition to the chimney, a flange for supporting it being added to the burner.

New inventions in lamps, including various modifications in chimney, burner, or wick, are being constantly offered to the public. Many of these are practically valueless and are soon forgotten. Of several which are unquestionable improvements, one modification of the structure of the lamp is to be noted as especially valuable for perfect combustion, and clear, white, steady, and powerful light. Under various forms it involves the principle of an interior central draft, additional to the draft directed from outside upon the wick. The wick is of cylindrical form, and an air-shaft or tube of the size of the wick leads up to it from the bottom of the lamp through the oil chamber. This tube is continued somewhat above the wick, but perforated. Details of construction vary, and the principle is more or less fully carried out in different forms. Properly developed, it gives a light rivalling gas in brilliance while far excelling it in cheapness.

LAMPASS, n. *lām'pās* [F. *lampas*—from L. *lampas*, a lamp]: a fleshy swelling on the roof of a horse's mouth, said to be so called as formerly removed by burning.

LAMP-BLACK: fine soot produced by burning resin, turpentine, pitch, oil, and other matters, in such a manner that large volumes of smoke are formed and condensed in properly arranged receptacles. L.-B. is the coloring matter of black and slate-colored paints. Large quantities are made in Germany by burning the refuse resin and fragments of fir and pine trees. The combustion is carried on slowly, and the dense smoke passes up a long flue, at the top of which is a large hood made of coarse woolen cloth. In this hood the carbon is deposited rapidly at the rate of 20 to 30 lbs. an hour, which is collected by lowering the cloth hood, and shaking it out. In Great Britain, a similar process is adopted; but large quantities of an inferior kind are collected also from the flues of coke-ovens; and a superior kind, known as *bone-black*, is obtained from the flues of kilns in which bones are calcined for manure. By mixing L.-B. in various proportions with white-lead, every gradation of color, from jet black to slate and gray, can be easily produced.

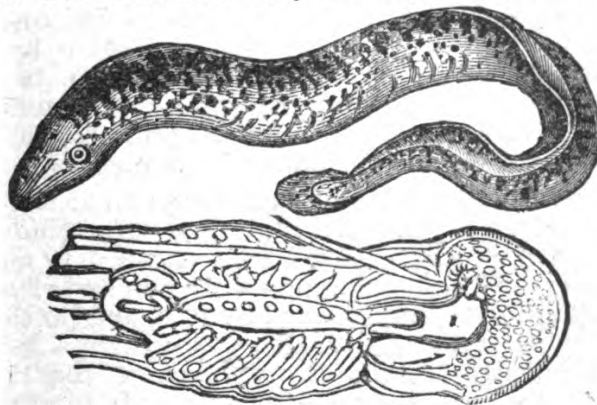
LAMPEDUSA, *lām-pā-dō'sā* (anc. *Pelagia*): small uninhabited island in the Mediterranean Sea, about midway between Malta and the coast of Tunis. It belongs to Italy, having been formerly a dependency of Sicily. It is about seven m. in length, and in most places not quite one m. in breadth, its circuit being about 13 m. The w. part of the island is covered with dwarf olives; and these and other shrubs supply great quantities of firewood, both to Tripoli and Malta. Great numbers of wild goats inhabit the island. L. was at one time inhabited. Near it are the two islets *Lampione* and *Linosa*.

LAMPERN—LAMPREY.

LAMPERN, n. *lăm'pèrn*: river-lamprey: see **LAMPREY**.

LAMPOON, n. *lăm-pôn'* [OF. *lamponner*, to dally or play the fool with, to foist, to fib]: personal satire in writing; written censure: V. to make fun of a person; to assail with personal satire; to satirize. **LAMPOON'ING**, imp. **LAMPOONED'**, pp. *-pônd'*. **LAMPOON'ER**, n. *-ér*, one who writes lampoons. **LAMPOON'RY**, n. *-rî*, written personal abuse or satire. *Note*.—**LAMPOON** may also be derived from F. *lampon*, originally a drinking-song, from the interjected exclamation *lampons!* 'let us drink!' in singing those songs, from F. *lamper*, to drink—see Skeat, who quotes Littré; see also Wedgwood, for the etymology of the text.—**SYN.** of 'lampoon, n.': censure; abuse; satire; reviling;—of 'lampoon, v.': to revile; abuse; libel; slander; defame; calumniate.

LAMPREY, n. *lăm'prî* [F. *lamproie*; mid. L. and It. *lampreda*—from L. *lambĕrĕ*, to lick; *petra*, a rock—*lit.*, a lick of rocks], (*Petromyzon*): genus of cartilaginous fishes, dermopterous and having a circular mouth formed for sucking (*cyclostomous*). They are of eel-like form, and have no scales. The skeleton is very soft and imperfect. The tongue acts as a piston in the sucking mouth, which is armed with numerous hard teeth, or tooth-like tubercles. There are seven roundish gill-orifices on each side; the German name is *Neun-Augen* (Nine-eyes). Lampreys have the power of drawing in as well as of expelling water through the gill-orifices, and thus respiration is carried on even when they are firmly attached to some object by the sucking mouth. Lampreys often attach themselves very firmly to stones, and seem to rest with the body floating in the water; they



Common Lamprey (*Petromyzon marinus*).

live by sucking the blood of fishes, the skins of which their teeth readily pierce, and which are unable to shake them off. They eat also any soft animal matter. The species are numerous, and are widely distributed in the seas of different parts of the world. Some are periodical visitants of fresh waters, as the COMMON L. (*P. mari-*

LAMPRIIS—LANA.

mus), found on shores and in rivers. It sometimes attains a length of more than three ft., and is often two ft. long. It ascends rivers in the latter part of spring or beginning of summer, for spawning. It was formerly in the highest esteem for the table, and it is an old custom for the city of Gloucester, England, to present a *L. pie* annually to the sovereign. Worcester also is famous for its *L. pies* and potted lampreys. In Scotland, a strong prejudice exists against the lamprey. Their flesh is difficult of digestion; and Henry I. is said to have died from indulgence in this, his favorite dish.—The *L.* of N. America, though very similar, was formerly classed as a distinct species (*P. Americanus*): it is now understood that the three (or at least two of the three) species common in Europe are the usual species in America.—A smaller species, the RIVER *L.* (*P. fluviatilis*), often called the LAMPERN, is very abundant in some rivers of England at certain seasons of the year. It is seldom more than 15 or 18 inches long, blue above, silvery white beneath. It is used for pies, like the common lamprey.—A little blood thrown into water where lampreys are supposed to be, soon attracts them. They are caught by baskets and other traps, like eels. They are very tenacious of life, living for days in a damp place, out of the water.

LAMPRIIS: see ОРАН.

LAMP'SHELL (*Terebratula*): genus of brachiopodous mollusks (see BRACHIOPODA), having a delicate shell, of which one of the valves is larger and more convex than the other, prolonged backward into a kind of beak pierced by a hole or fissure. Internally, there is a delicate bony framework, of two branches, attached to the dorsal valve, by which the *arms* (see BRACHIOPODA) are supported. This is called the *loop*, and often by shell-collectors the *carriage-spring*: it is well seen in many fossil *Terebratulæ*. The recent species are numerous, and very widely distributed from the polar to the tropical seas; fossil species are extremely numerous.

LAMPSON, *lâmp'son*, Sir CURTIS MIRANDA: 1806, Sep. 21—1885, Mar. 13; b. Vt.: capitalist. He removed to England 1830, was naturalized 1848, engaged in mercantile business in London, became a director and vice-pres. of the Atlantic Telegraph Company 1856, and on the successful laying of the great cable was created a baronet. He subsequently became deputy gov. of the Hudson Bay Company and a trustee of the Peabody fund for the relief of the poor of London.

LAMPY'RIS—LAMPY'RIDÆ: see GLOW-WORM.

LANA, n. *lâ'na* [the native name]: kind of close-grained, tough wood, from the *Gempa Americana*, tree of the cinchona family, native of British Guiana. The fruit called genipop, yields a pigment called *lana* dye, used by the natives to stain their skins.

LANARK—LANARKITE.

LANARK: town in Rock Creek tp., Carroll co., Ill.; on the Chicago Milwaukee and St. Paul railroad; 7 m. e. of Mount Carroll, 21 m. s.w. of Freeport. It is an important cotton-shipping point, has a number of large warehouses and elevators, and contains a national bank, weekly newspaper, several factories, and a flour-mill. Pop. (1870) 972; (1880) 1,198.

LANARK, *län'ark*: parliamentary and municipal burgh and market-town of Scotland, county of the same name, on land rising from the Clyde, 30 m. s.w. of Edinburgh. Its antiquity is attested by the fact, that here, 978, Kenneth II. assembled a parliament, or meeting of the estates of the realm. The town has little trade, but derives some support from the numbers attracted to this district by the beauty of the scenery. About a mile to the s., lies the manufacturing village of **NEW LANARK** (pop. 973), noted as the scene of Robert Owen's experiment (1815-27) for the social improvement of the working-classes.—Pop. of L. (1881) 4,908.

LANARKITE, n. *län'ark-īt*: a mineral consisting of sulphate and carbonate of lead, occurring either massive or in long, slender, right-rhombic prisms, of a greenish-white or gray color—first found at Leadhills in Lanarkshire.

LANARKSHIRE—LANATE.

LANARKSHIRE, *län'ark-shér*, or **CLYDESDALE**, *klidz'-dāl*: inland county of Scotland; w. of the shires of Edinburgh, Linlithgow, and Peebles; length 52 m., width 34 m., 889 sq. m., or 568,868 acres; valued rental, including railways, etc. (1879-80), £2,103,581. This county is subdivided into upper, middle, and lower wards. The first comprises more than one-half the county, and consists in a great measure of hills and moorish ground; the second contains about 160,000 acres, much of which is unprofitable; the third, which contains the city of Glasgow, is nearly all cultivated, though very little of the soil, aside from that bordering on the Clyde, is of first quality. The principal hills are the Lowthers, which rise in Green Hill to 2,403 ft.; Tintock is 2,350 ft. high. In the upper ward is the village of Leadhills, 1,323 ft. above sea-level. This county has great mineral wealth. There were more than 450 pits from which minerals were raised 1880; the coal raised amounted to 10,000,000 tons, and the ironstone to 757,000 tons. The cotton, flax, and woolen manufactures in and around are very extensive, and constitute one of the most important sources of wealth in the country. The county is watered principally by the Clyde (q.v.) and its affluents. L. was famous for its orchards as early as the time of the Venerable Bede. They yielded, early in the present century, as much as £8,000 yearly, but have latterly decreased; and the ground is more profitably employed in producing gooseberries, vegetables, etc., for the Glasgow market. The climate of L. is moist, and in many of the lower districts mild and genial, but often cold and boisterous in the high grounds. It is not in general well suited for grain crops; but much of it is excellently adapted for the rearing of stock and for dairy purposes. In 1881, the total acreage under rotation was 247,777; of which there were 3,790 acres of wheat; 682 barley; 44,982 oats; 8,552 acres turnips; and 9,427 acres potatoes. The total acreage under grain crops was 50,975; under green crops, 19,578; under clover and grasses, 63,361; and under permanent pasture, 113,407. Of live-stock, the numbers were—horses for agricultural purposes, 7,755; cattle, 64,276; sheep, 208,632; swine, 5,796. Besides Glasgow, L. contains the royal burghs of Lanark (the county town) and Rutherglen, the towns of Hamilton, Airdrie, Coatbridge, Wishaw, Motherwell, etc.—Parliamentary constituency (1882) 14,431; (1886) 56,050.—Pop. (1871) 765,339; (1881) 904,405.

LANATE, *a. lā'nāt*, or **LANATED**, *a. lā-nā'tēd* [*L. lanātus*, furnished with wool, woolly—from *lana*, wool]• woolly; covered with curly hair like wool.

LANCASHIRE.

LANCASHIRE, *lānk'a-shēr*, or **COUNTY OF LANCAS-TER**: county of England, second (after York) in area, and first in population (followed by Middlesex). It is bounded e. by Yorkshire, w. by the Irish Sea, n. by Cumberland and Westmoreland, s. by Cheshire; 1,207,926 statute acres, or 1,905 sq. m. Pop. (1871), 2,819,495; (1881), 3,454,441. The gross rental of the county (1881) was £19,243,918 (as compared with £24,872,555 for Middlesex). An outlying portion of the county, called Furness, whose greatest length is 25 m., greatest breadth 16 m., is separated from the main portion by Morecambe Bay. The larger division is intersected in the n. and e. by branches of the hill system which runs southward through the counties of York and Derby, while Furness has on its e. border the Cumbrian range. Toward the coast on the w. the surface is flat, particularly in the larger division, with a curving outline and large stretches of sand, over which in various places the sea seems to be extending. The chief rivers are the Mersey, Ribble, Lune, Wyre, Leven, and Duddon, all entering the Irish Sea by estuaries more or less important—Morecambe Bay being the chief indentation. The climate is moist, but mild, the soil being peaty in upland districts, but a fertile loam mostly in the flats. Oats and potatoes are general crops; wheat grows well in the s. division. Coal is the chief mineral product (the coal-field being estimated at 400 sq. m.); lead and copper occur, and iron is plentiful in Furness. The whole surface is covered with a network of canals and railways connecting the principal manufacturing and commercial centres: see **MANCHESTER**: **LIVERPOOL**: **PRESTON**: **BLACKBURN**: ETC. L. is famous for immense cotton manufactories, which, 1879, numbered 2,000, giving employment to 370,000 persons. The other textile manufactures are likewise of considerable importance. Manufacture of all kinds of machinery is extensive, and ship-building, sail-making, and kindred trades flourish. The county returns (since 1885) 23 members to parliament (formerly eight), besides those for the boroughs. The district of Furness presents many attractions to the tourist. On its n.e. border stretches the beautiful lake Windermere, westward from which is Eastwaite Water; and further w., Coniston Lake, and the 'Old Man of Coniston,' with a height of 2,633 ft. In the peninsula between the rivers Duddon and Leven is Furness Abbey, a noble ruin, the effect of which is enhanced by the picturesque beauty of the scenery in the vicinity. The abbey was founded 1127 by Stephen, Earl of Mortagne or Mortoil, afterward king of England. The church is 287 ft. long, the nave 70 ft. broad. In the township of Whalley, in the e. of L., is a very old church, and in the churchyard are three crosses, apparently of Saxon origin. In the vicinity are the ruins of an abbey of about the same age as Furness. Near Whalley is the Rom. Cath. college of Stonyhurst. The only islands are off the s. extremity of Furness.

LANCASTER.

LANCASTER, *lānk'as-tēr*: city in Fairfield co., O., on the Hocking river and canal, 32 m. s.e. of Columbus, 116 m. e.n.e. of Cincinnati; at the junction of the Columbus and Hocking Valley and the Cincinnati and Muskingum Valley railroads. L. is the centre of a productive district, has fine public buildings, including the co. court-house. There are weekly newspapers, excellent public schools, 1 national bank (cap. \$60,000), 2 private banks, and a good supply of churches and hotels. Manufactures are various and important; there is a large wine-cellar with storage for 40,000 gallons. Pop. (1870) 4,725; (1880) 6,803.

LANCASTER: city, cap. of Lancaster co., Penn.; on Conestoga creek and the Pennsylvania railroad; 36 m. e.s.e. of Harrisburg, 42 m. s.w. of Reading, 68 m. w. of Philadelphia. It is in a rich and beautiful section, excelling all other parts of the state in the production of wheat and tobacco, and is the centre of the most productive limestone region in the state, if not in the country. The city is laid out regularly, with streets crossing at right angles, and the principal ones macadamized; is the focus of 14 macadamized roads; is lighted by gas and electricity, and is supplied with water from Conestoga creek, distributed by a costly system of works. In 1880 it had 313 manufacturing establishments, using a capital of \$3,792,740, employing 4,252 hands, paying in wages \$1,177,249, and yielding products valued at \$5,404,937. The manufacture of cotton goods used a capital of \$1,500,000, employed 1,700 hands, and paid \$450,000 in wages. As the centre of a large seed-leaf tobacco business, it manufactured nearly 20,000,000 cigars annually. It also produced about 25,000 barrels of lager beer annually. Other notable manufactures were watches, bent-wood, glue, rope, pottery, machinery, boilers, engines, fan-blowers, brass goods, belting, leather, furniture, edge-tools, flour, fertilizers, tanners' machinery, and organs. There are 39 churches, a high school, 35 graded schools beside Rom. Cath. schools, 7 national banks (cap. \$1,685,000), 2 private banks, and 3 daily and 5 weekly newspapers. L. is the seat of Franklin and Marshall College and Theol. Seminary (chartered 1853 under the auspices of the German Ref. Church), which had (1886-7) 9 professors and instructors and 83 students; grounds, buildings, and apparatus valued at \$250,000, productive funds \$117,869, income therefrom \$7,223, tuition fees \$850, other sources \$20,000, total income \$28,073, benefactions \$2,000; president, Thomas G. Apple, D.D., LL.D. Yeate's Institute also is located here. The public buildings comprise an attractive co. court-house in the Grecian style, city hall, Masonic hall, Odd Fellows' hall, public hall, opera house, co. prison, Rom. Cath. hospital, and 2 public libraries. L. was settled 1729, was the state cap. 1799-1812, incorporated 1818, and was the largest U. S. inland city 1750-1825. Pop. (1870) 20,233; (1880) 25,769.

LANCASTER.

LANC'ASTER: municipal and parliamentary borough and seaport of England, cap. of Lancashire, picturesquely situated on an eminence on the left bank of the Lune near its mouth, and 230 m. n.n.w. of London. The ancient castle, which overlooks the town, is now used as a co. jail and court-house. The houses are of the free-stone quarried in the vicinity, and though the streets are narrow, the town is neat and well built. The Lune is here crossed by a bridge of five arches, and by an aqueduct carrying the Lancaster canal. The town contains numerous scientific, benevolent, and educational institutions. There is some trade in coal and limestone. The chief manufactures are furniture, cotton, silk, table-baize, American leather, cloth, and cast-iron work. In 1880, 584 vessels, of 199,000 tons, entered and cleared the port. Pop. (1881) 20,724.

LANC'ASTER, DUCHY OF: duchy and county palatine (see **PALATINE**) of England, created by royal charter, in which respect it differs from Durham and Chester. Edward III., on the death of Henry, Duke of Lancaster, conferred the duchy on John of Gaunt and his heirs for ever. (See **JOHN OF GAUNT**.) Henry IV., and, during the Wars of the Roses, Edward IV., both endeavored so to settle the duchy that it should descend to the heirs of their body apart from the crown, and continue with them in the event of their losing the latter. The result of these several attempts has been the preservation of the duchy as a separate possession in order and government, but united in point of inheritance. The revenues of the duchy form no part of those hereditary revenues in lieu of which the Civil List (q.v.) was granted. The net proceeds are paid over to the privy purse, and wholly exempted from parliamentary control, except that the annual account for receipt and expenditure is presented. The county palatine forms only a portion of the duchy, which includes considerable estates not within the county palatine. There is a chancellor of the duchy (i.e., of the part of it which does not lie within the county), and of the county palatine, which two offices are generally united. The duchy court of Lancaster, held at Westminster, presided over by the chancellor of the duchy, or his deputy, exercises jurisdiction in all matters of equity relating to the lands of the duchy. The administration of justice has recently been assimilated to that of the rest of England. The office of chancellor is a political appointment, which it is the practice to confer on a statesman of eminence, frequently a member of the cabinet, who is expected to devote his time to such larger questions occupying the attention of government as do not fall within other departments. The emoluments of the office are about £2,000 per annum. By 17 and 18 Vict. c. 12, the chancellor of the duchy, with the two lords justices of the court of appeal, form the palatinate court of appeal.

LANCASTER—LANCASTER SOUND.

LANCASTER, Sir JAMES: first English navigator who commanded a fleet bound for the E. Indies. He sailed from Plymouth, 1591, Apr. 10. In 1600, the newly constituted *East India Company* intrusted him with their first expedition. L. having, in the course of his voyages, collected a number of valuable documents in support of the existence of a n.w. passage, the government, acting on his advice, sent out an expedition to attempt to discover it. They discovered a strait in 74° n. lat., named by Baffin in honor of L., *Lancaster Sound*. L. was created a baronet for his services, and died in 1620. The history of his voyages has been preserved by Hakluyt and Purchas.

LANCASTER, JOSEPH: see BELL, ANDREW: MUTUAL INSTRUCTION.

LANCASTER GUN: species of rifled cannon, partially adopted in the British service. When the great difficulty of rifling heavy ordnance to an extent to give a sufficient rotary motion to the projectile became apparent, Mr. Lancaster devised a plan by which grooves might be dispensed with altogether. Instead of a strictly circular bore, he gave his gun an elliptical bore, the ellipse being of very small eccentricity. The major axis was not in one plane from end to end of the gun, but was made to revolve in the length, until it had moved round one-fourth the periphery of the ellipse. The projectiles are, of course, elliptical also; elongated, and somewhat pointed in front. When the shell is projected, it must follow the twist in the bore, and the rotary motion thus imparted is retained to the end of the range. (For the effect, see RIFLED ARMS). Several Lancaster guns were employed at the siege of Sebastopol, and some of them burst. But these were scarcely fair specimens, being service 8-inch guns (with circular bore) bored to Mr. Lancaster's elliptical standard, and therefore weakened. The wrought-iron guns on his special model have given more certain results. The special advantage claimed for the Lancaster is that it fouls less than any other in use. See RIFLED ARMS.

LANCASTER HERALD: one of the six heralds of England, ranking second in seniority. His office is said to have been instituted by Edward III., in the 34th year of his reign, when he created his son, John of Gaunt, Duke of Lancaster. Henry IV. raised Lancaster to the dignity of a king-at-arms. Edward IV., after reducing him back to the status of a herald, abolished his office, which was revived by Henry VII.

LANCASTER SOUND: western inlet of Baffin's Bay, lat. 74° n., and from 80° to 87° w. long. Though this opening into the polar ocean was discovered by Baffin himself, as early as 1616, yet it was virtually neglected for more than 200 years. At length Parry, 1819, penetrated through it into Barrow's Strait, and, beyond it, to the North Georgian Islands.

LANCE.

LANCE, n. *läns* [F. *lance*—from It. *lancia*—from L. *lancĕā*, a lance: F. *lancer*, to dart: comp. Gael. *lann*, a blade, a sword]: a long shaft of wood with a spear-head; differing from *spear* or *javelin* in that it was intended not to be thrown, but to be thrust at the enemy by force of hand, and with the impetus acquired by speed, and thus was most effective in the hands of a mounted soldier. Hence the lance was the favorite arm with knights for commencing a combat; it was of tough ash, of considerable length, weighted at the end, and held not far from the hilt. See **TOURNAMENT**. In modern warfare, the lance is a long rod of tough ash, with an iron point, and usually a colored flag near it. It is the offensive arm of **LANCERS**. **LANCE**, v. to pierce with a lance; to open with a lancet. **LANCING**, imp. *läns'ing*: N. the act of one who uses a lancet. **LANCED**, pp. *länst*. **LAN'CER**, n. *-sér*, one who carries a lance, as a soldier; one of that class of cavalry soldiers who are armed with lances: see **CAVALRY**. The type and perfection of lancers are the Russian Cossacks, whose long lances enable them to combat with enemies at a distance at which they themselves take little harm. The lancers were brought into European notice by Napoleon, who greatly relied on some Polish regiments. After the peace of 1815, the arm was adopted in the English service, but it is thought by many that the British lancer has a weapon too short to enable him to charge an infantry square with any chance of success. **LAN'CEOLAR**, a. *-sē-ō-lér*, tapering toward the end. **LAN'CEOLATE**, a. *-lāt*, or **LAN'CEOLATED**, a. *-lā-tēd* [mid. L. *lancĕölātus*, furnished with a spike—from L. *lancĕā*, a light spear]: gradually tapering toward the extremity; shaped like the head of a spear. **LAN'CIFORM**, a. *-sĭ-fawrm* [L. *forma*, shape]: lance-shaped. **LANCE-CORPORAL**, a soldier from the ranks doing the duties of a corporal with temporary rank as such—so named from *lance*, the old name of a foot-soldier, from his carrying a lance or pike. **LANCE-WOOD**, wood valuable for its great strength and elasticity; produced by the small tree *Guatteria virgata* (natural ord. *Anonaceæ*). Another species, *G. laurifolia*, yields the less used White Lancewood. L. is of great value to coach-builders, by whom it is used for shafts and carriage-poles. The part used is the main trunk of the tree, which is very straight, and rarely more than nine in. in diameter with the bark on. It comes in small quantities from the W. Indies, chiefly from Jamaica.

LANCE, n. *läns* [L. *lanx*, or *lancem*, a dish]: the dish or plate of a balance.

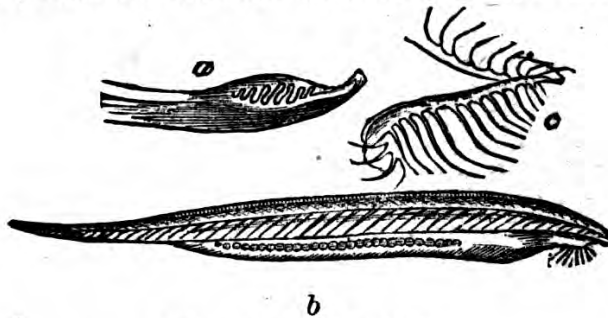
LANCE, THE HOLY: in the Greek Church, the knife with which at the Eucharist the priest pierces the bread, in commemoration of the piercing of the side of the Lord Jesus on the cross by a Roman spear.—In ecclesiastical legend, a L. made from the nails with which

LANCEGAY—LANCELET.

Christ was fastened to the cross; later identified with the spear that pierced his side; said to have been presented by King Rudolph of Burgundy to King Henry I. of Germany: it was brought to Prague, and Innocent VI. established a festival in honor of it, 1354. Another legendary L. was discovered by Empress Helena, and was in Jerusalem, then in Antioch, Constantinople, Venice, France, Constantinople again.

LANCEGAY, n. *läns'gā* [OF. *lance-zagaye*—from *lance*, a lance; *zagaye*, a kind of light pike used by Moorish horsemen: Sp. *azagaya*, a dart]: in *OE.*, a kind of lance or spear.

LANCELET, n. *läns'lēt*, or LANCELOT, n. *läns'löt* [mid. L. *lanceolatus*, furnished with a spike (see LANCE)], (*Amphioxus*, or *Branchiostoma*): genus of Dermopterous fishes (q.v.), of very remarkable organization, far lower than that of any other vertebrate animals, connecting cartilaginous fishes both with mollusks and with annelids. A few species are known, all small; one (*A. lanceolatus*), the first discovered (1774) is a native of the coasts of Europe. The L. is found also in N. and S. America, Australia, and Borneo. It inhabits banks of sand, and when dug up, buries itself again in the sand with wonderful activity. It is at the utmost scarcely more than two inches in length, very much compressed, tapering to a point at each extremity, the head not notably distinct from the body. It is silvery white and semi-transparent; the skin destitute of scales. A low dorsal fin



Lancelet (*A. lanceolatus*):

a, mouth, seen from below; *b*, general figure; *c*, hyoid bone, with filaments attached.

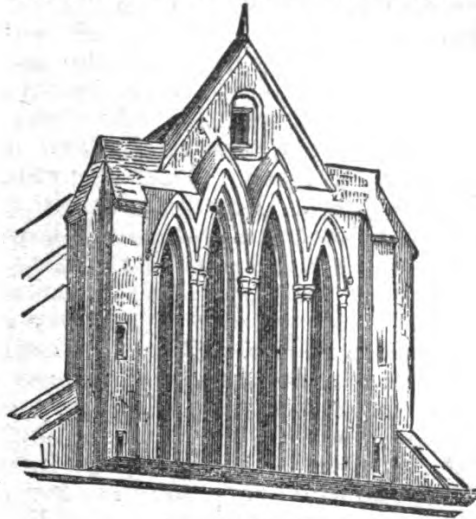
extends the whole length of the back. The skeleton is merely rudimentary, the spine being represented by a fibrous sheath, containing a great number of transverse membranous plates. There is no vestige of a skull, or any enlargement of the spinal cord into a brain; nor is the L. furnished with organs of sight or of hearing. The mouth is situated beneath that part of the body which may be regarded as the head; and is surrounded by a cartilaginous ring, in several pieces, each of which gives off a prolongation to support *cirri*, or short filaments. The mouth communicates with a wide and long cavity, which contains the organs of respiration, and from the

LANCELOT OF THE LAKE--LANCIANO.

other extremity of which the alimentary canal proceeds. The L. does not eat or swallow, but simply imbibes its food, with the water which supplies air for respiration. The intestine is slender and almost straight; but there is a very long cœcum. The walls of the respiratory cavity and the intestine are covered internally with vibratile cilia. The blood is colorless. Instead of a heart, there are several elongated blood-vessels, which contract successively; and at the commencement of each of the vessels connected with the organs of respiration there is a little contractile bulb. The muscular system accords with that of the higher fishes.—The very anomalous structure of the L. has led to the supposition that this genus may represent a family or order formerly more numerous, but belonging rather to past geologic periods than to the present.

LAN'CELOT OF THE LAKE: one of the heroes of the legendary story of King Arthur and the Round Table: see ARTHUR.

LANCET, n. *lân'sèt* [F. *lancette*, dim. of *lance*, a lance]: a small, sharp, two-edged knife, used by surgeons to open veins, tumors, etc. LANCET-WINDOW, narrow window, with acutely-pointed arch head; much used in England



Lancet-Window:

From Glasgow Cathedral.

and Scotland during the early pointed period of Gothic architecture. It was retained in Scotland much later than in England. Frequently several lancet-windows are grouped together.

LANCIANO, *lân-chá'nō* (*Anxia* or *Anxa* of Pliny, subsequently *Ancianum*): town of s. Italy, province of Chieti, and cap. of the dist., 6 m. from the Adriatic, and 15 from Chieti. Its present site occupies three hills, of which two are connected by an ancient bridge of great square blocks of stone, originally dedicated to Diocletian. The central position of this town favored

LANCINATE—LAND.

its being selected as a centre of judicial and civil administration during both the Roman and Gothic periods, and from its extensive traffic, it obtained the title of 'The Emporium of the Frentani.' L. has a fine cathedral, adorned with marbles and valuable paintings; contains several large foundries, and carries on manufactures of linen goods and farinaceous pastes. Pop. (1881) 8,500.

LANCINATE, v. *lăn'si-nât* [L. *lancinātus*, torn or rent to pieces]: to tear; to lacerate. **LAN'CINATING**, imp.: **ADJ.** piercing, or seeming to pierce, with a sudden shooting pain. **LAN'CINATED**, pp. **LAN'CINA'TION**, n. *-nă'shŭn*, a tearing; laceration.

LAND, n. *lănd* [AS., Ger., and Icel. *land*, land—akin to W. *glan*; Cornish, *gland*, shore, bank of a river]: the dry solid portion of the earth; a district, region, or country; soil; earth; ground which any one possesses; real estate (see **LANDED PROPERTY: ESTATE**, in **LAW: AGRARIAN LAW**): **V.** to set on shore from a vessel; to go on shore from a ship; to disembark. **LAND'ING**, imp.: **ADJ.** connected with or pertaining to the process of unloading anything from a vessel, etc.: **N.** the act of going or setting on shore from a vessel; a place for going or setting on shore, either for passengers or goods. **LAND'ED**, pp.: **ADJ.** having an estate in land; consisting in real estate or land. **LAND'ER**, n. one who makes a landing; in *mining*, one at the head of the shaft who receives the ore. **LAND'LESS**, a. without real estate or land. **LANDWARD**, ad. *lănd'wêrd*, toward the land or country; in a direction from the sea. **LAND-BREEZE**, the wind blowing from the land. **LAND-CARRIAGE**, transportation by land. **LAND-CRAB**, a crab which lives much on the land (see that title, below). **LANDFALL**, the first land discovered after a voyage. **LAND-FLOOD**, an inundation caused by the spread of water from a heavy rainfall. **LAND-FORCE**, a body of soldiers operating on land. **LAND-JOBBER**, one who makes it his business to buy and sell land. **LANDLADY**, a woman who has tenants holding from her; the mistress of an inn or lodging-house. **LANDLORD**, the master of a house; the proprietor of houses or lands; one who keeps an inn or tavern. **LAND-HOLDER**, or **LANDOWNER**, a proprietor of land. **LAND-LOCK**, v. *lănd'lŏk*, to inclose or encompass with land. **LAND'LOCKING**, imp. **LAND'LOCKED**, pp. *-lŏkt*: **ADJ.** shut in or inclosed by land. **LAND-LUBBER**, n. *-lăb'ér*, or **LAND-LOPER**, *-lŏ'pér* [probably Dut. *landlooper*, land-runner—from *land*, land, and *loopen*, to run]: one who has no settled habitation; among *seamen*, applied in ridicule or contempt to persons who pass their lives on land. **LANDMARK**, any fixed object to designate the boundary of land, or the limits of a farm or town; any prominent object on land which serves as a guide to seamen. **LAND-MEASURE**, a measure by which the superficial contents of a portion of land, as a field, a farm, etc., may be as-

LAND—LANDAU.

certained. **LAND-MEASURING**, the art of determining the superficial contents of a portion of land. **LAND-RAIL**, *-rāl*, a bird, one of the rail family, frequenting grass and corn fields; the corn-crake (see **CRAKE**). It is not included in the definition of 'Game,' yet protected in Britain by the game laws: see **GAME: POACHING**. **LAND-SLIP**, portion of a hill or mountain which slides down (see that title, below). **LANDS'MAN**, or **LAND'MAN**, one who lives on land, as opposed to a seaman; on *ship-board*, a sailor who has never been at sea before. **LAND-STEWARD**, a person intrusted with the care of a landed estate. **LAND-SURVEYING**, the art of determining the boundaries and superficial extent of a portion of land, as a farm, an estate, etc. (see that title, below). **LAND-TAX**, tax laid on land or buildings - (see that title, below). **LAND-WAITER**, *-wā-tēr*, or **LANDING-WAITER**, an officer of the customs who attends on the landing of goods. **LANDED PROPRIETOR**, an owner of real estate or land. **LANDING-NET**, a net used by anglers for landing large fish when caught by the line. **LANDING-PLACE**, a place for the landing of persons or goods from a vessel; a landing. To **LAND A FISH**, among *anglers*, to bring a fish to land by skilful management, or by means of a landing-net. **LAND OF THE LEAL** [Scot. *leal*, loyal, faithful]: a pathetic Scotch song in which the phrase signifies the blessed abode of the true-hearted and faithful; heaven: see **LEAL**. **LAND OF CAKES**, applied to Scotland, as famous for its oatmeal-cakes. **LAND OF PROMISE**, Palestine or Canaan, as promised by God to Abraham and his seed.—**SYN.** of 'land, n.': country; ground; mold; world; globe; region; nation; people.

LAND, n. *lānd* [Gael. *lann*, a house, a tenement]: in *Scot.*, a building containing different sets of tenements or dwellings, one above the other, under a common roof, each tier of dwellings being called a *flat*, and each separate dwelling in a *flat*, entering from a common stair, being called a *house*. **LAND'ING**, n. the broad level part of a staircase.

LAND, TITLES TO: see **TITLE**.

LANDAMMAN, n. *lānd'ām-ān* [Ger. *landamtman*—from *land*, land; *amtman*, bailiff]: in *Switzerland*, the chief magistrate of a canton.

LANDAU, n. *lān-dō'* [*Landau*, a town in Bavaria]: a light carriage whose top may be opened and thrown back.

LANDAU, *lān'dow*: town and fortress of Bavaria, dist. of Rhenish Pfalz, in a beautiful region on the Queich, which fills its fosse with water; 20 m. n.w. of Carlsruhe. Here are important manufactures of tobacco. L. has been the scene of important events during every great war since the 15th c. In the Thirty Years' War, it was taken eight times by Swedes, Spaniards, Imperialists, and French. In 1684, it was fortified by Vauban, and was considered impregnable until taken, 1702, by the imperialists under the Markgraf Ludwig of Baden. **Pop.** (1880) 8 749.

LAND-CRAB.

LAND-CRAB: popular name of all those species of Crab (q.v.) which in a mature state are not aquatic. They are now erected into a family or tribe, and divided into several genera. The species are numerous, and all inhabitants of warm countries. They much resemble the common crabs of the shores, and are remarkable as animals breathing by gills, and yet not aquatic, some of them inhabiting very dry places, where they burrow in the sand or earth; but such presence of moisture is absolutely necessary to them as to prevent the desiccation of their gills. Many, and probably all of them, deposit their spawn in water, for which purpose some annually migrate from considerable distances to the sea; but there is reason to suppose that some deposit their spawn in fresh water. The **BLACK CRAB**, or **MOUNTAIN CRAB** (*Gecarcinus ruricola*), of the W. Indies, usually resides in woods and on hills at a distance of at least one m., often



Land-Crab (*Gelasimus masionis*).

two or three m. from the sea, which, however, it regularly visits in April and May, when immense numbers may be seen journeying together, moving straight on, unless obstacles quite insuperable impede their progress. Like most of the other species, this L. is active chiefly during the night; and except in rainy weather, it seldom leaves its burrow by day. It feeds mostly on vegetable food. When in season, it is highly esteemed for the table, as are some of the other land-crabs; and its spawn or roe, which before being deposited forms a bunch as large as a hen's egg, is accounted a delicacy.—A L. of Ceylon (*Ocypode*) makes such troublesome burrows in the dry soil of the equestrian promenade at Colombo, that men are kept in regular employment to fill them up.—The grass lands of some parts of India swarm with small land-crabs, which feed on the grass, or on green stalks of rice.

LAND-DAMN—LANDER.

LAND-DAMN, v. *lând-dăm'* [Gael. *lann*, the penis, a sword; *damh*, an ox]: in *OE.*, to scourge with a dried bull's penis; to chastise with contumely.

LANDED ESTATES' COURT: see **INCUMBERED ESTATES' COURTS**.

LANDED MEN, JURY OF, in Scotch Law: jury the majority of whom are landed proprietors. Such a jury a landed proprietor may demand when tried for a criminal offense.

LANDED PROPERTY: not a legal, but a popular phrase, to denote property which consists of freehold estates in land, or, in Scotland, heritable estates. L. P. includes houses and all things called corporeal, also some incorporeal rights connected with land.—For the various ways in which this important kind of property is held, and the formalities attending its transfer, see **ALLODIUM: FEE: FREEHOLD: COPYHOLD: FEOFFMENT: DEED: FEU: SASINE: CHARTER: CONVEYANCE: CONVEYANCING: SALE: TITLE: ETC.**

LANDER, *lăn'dér*, **FREDERIC WEST**: 1822, Dec. 17—1862, Mar. 2; b. Salem, Mass.: soldier. He studied civil engineering in the Norwich Milit. Acad., Vt.; conducted two expeditions across the continent at great peril to survey a route for a railroad to the Pacific, and was the only survivor of the second: surveyed and constructed the great overland wagon-route: was appointed brig.gen. 1861, May, and distinguished himself in the early Va. campaigns, dying of congestion of the brain at Paw Paw, Va., while preparing an attack on the Confederates.—His wife, **JEAN MARGARET DAVENPORT**, actress, b. Wolverhampton, Eng., 1829, May 3, made her first appearance on the stage 1837, came to the United States 1838, returned to Europe 1842, revisited the United States 1849, married Gen. Lander 1860, Oct. 12, made her home in Mass. after the war, and has since appeared as an actress in several leading American cities, and as a dramatic reader.

LANDER, **LOUISA**: sculptor: b. Salem, Mass., 1826, Sep. 1; sister of Gen. Frederic West L. She began her art career by modelling likenesses of members of her family and executing cameo heads; went to Rome 1855 and studied sculpture with Thomas Crawford; and has since produced in marble several portrait busts and statues and statuettes of *To-Day*, *Galatea*, *Virginia Dare* (q.v.), *Undine*, *Virginia*, *Evangeline*, *Elizabeth*, *the Exile of Siberia*, *Ceres Mourning for Proserpine*, and *A Sylph Alighting*.

LANDER, *lăn'dér*, **RICHARD**: discoverer of the mouth of the Niger: 1804–1834, Feb. 6; b. Cornwall, England. He became a printer; but in 1825 went as a servant with Capt. Clapperton to Africa, and accompanied him from the Bay of Benin to Sókoto. There Clapperton died; and L., returning to England, published a journal con-

LANDERNEAU—LANDES.

taining an account of the expedition, giving proof of such qualifications, that the British govt. intrusted to him the prosecution of further researches concerning the course of the Niger. In 1830, he and his brother John L. succeeded in proving that the Quorra, or Niger, falls by many mouths into the Bight of Benin. The brothers were, however, seized by the negroes, and sold to a slave-dealer, but being brought to Cape Formosa, were redeemed by the master of a Liverpool ship. They returned to England 1830, June, and published *Journal of an Expedition to Explore the Course and Termination of the Niger* (3 vols. Lond. 1832). In 1832, they undertook a new expedition to the Niger in an iron steam boat, and bought a small island as a British trading-station. In 1833, Richard L., with a few companions, made a trading excursion in the delta of the Niger; but they were assailed by the natives, and L. received a wound, of which he died, at Fernando Po.—John L. (1807–1839, Nov. 16; bro. of Richard) was better educated; he was rewarded with an appointment in the Customs; but died from the effects of the African climate.

LANDERNEAU, *lǒng-dēr-nō'*: small seaport town of the dept. of Finistère, France, 13 m. n.e. of Brest. Only a few small vessels belong to the town, although about 700 enter and clear the port annually. The harbor admits vessels of 400 tons. Pop. 8,000.

LANDES, *lǒngd*: maritime dept. of France, one of the largest and most thinly peopled in the country: bounded by the Bay of Biscay; 3,585 sq. m. The chief river is the Adour. The railway from Bordeaux to Bayonne passes n. to s. through the whole length of the province. Of the entire area of the dept. 51,100 acres are in vineyards, and about 10,000,000 gallons of wine are produced annually. The dept. is divided into three arrondissements, Mont-de-Marsan, St. Sever, and Dax. Cap., Mont-de-Marsan. Pop. of dept. (1876) 303,508; (1881) 301,143.

LANDES, n. plu. *lǎngdz* [F. *landes*, heaths—from Ger. *land*, land (see LAND 1)]: extensive areas of sand-drift which stretch southward along the Bay of Biscay, from the mouth of the Gironde, and inward toward Bordeaux, between the Gironde and the Pyrenees. Few districts in Europe are more desolate and unproductive. The part nearest the sea is more so than that further inland on the rivers Adour and Midouze. The soil is in general sandy, sometimes marshy, mostly covered with nothing better than heath and dwarf shrubs, except where large plantations of fir and cork trees were made 1789, by direction of the minister Necker. Only a few more fertile spots yield crops of rye, maize, and millet. The inhabitants, who are called *Parens*, live in scattered villages of wretched huts, in the e. part of the L.: they are of Gascon race, very poor and rude, but active, good-natured, and hospitable. They usually walk on stilts in the marshy and sandy grounds. They keep bees, swine, and

LANDGRAVE—LAND LEAGUE.

sheep, and also live by fishing and hunting; and have begun to derive much advantage from the plantations of trees in which they find occupation in charcoal-burning, cork-cutting, and collecting turpentine, resin, and pitch. They also manufacture *sabots*, or wooden shoes. The sheep of the L. are of a wretched breed, with coarse wool.

LANDGRAVE, n. *lând'grāv* [F. *landgrave*; Ger. *landgraf*—from *land*, land; *graf*, earl: Dut. *landgraaf*]: a German nobleman; formerly the title of certain reigning princes of Germany. LAND'GRAVINE, n. *-grā-vēn* [Dut. *landgravin*]: the wife of a landgrave. See GRAF.

LAND LEAGUE, IRISH: an outgrowth of the Home Rule League, organized 1879, Oct., under the presidency of Charles Stewart Parnell (q.v.), for the expressed purpose of securing to land tenants in Ireland a reduction in their rents, a general refusal to pay rent if no reductions were made, and an entire change in the land-laws applicable to Ireland, by which peasant proprietors would be substituted for absentee landlords. The L. L. was organized in a year of remarkable suffering in Ireland, caused by a failure of the crops; and this fact was used to demonstrate the justice of granting Irish farmers relief in the way of reduced rentals. In the agitation that spread over the country, a number of landlords unfortunately were killed; and without attempting to ascertain the particular causes of the crimes, the govt. at once assumed that they comprised a part of the preconceived plan of the L. L., and hastened to pass the celebrated Coercion Act. The operations of this law so intensified the agitation that 1881 the govt. passed a conciliatory act, known as the 'Land Act of 1881,' designed to secure to Irish tenants fixity of tenure, free sale, and fair rents: under this act tenants were empowered to apply to land courts for a revision of their rents when deemed oppressive, and the amounts of rents then fixed were to be known as judicial rents; and tenants were further empowered to make application to have their leases declared void. In all cases appeals were permitted from the land courts presided over by sub-commissioners to the chief land commissioner. Between the passage of the act and 1885, July 31, there were 122,599 applications to have fair rents fixed in court, 118,909 were disposed of, while 84,074 applications were fixed out of court. During the same time 1,500 applications to have leases declared void were made, of which 145 were granted. In the mean time many thousands of families were evicted by the constabulary because they either would not or could not pay their rents. The leaders of the L. L. actively spread their views through Ireland till arrested and imprisoned, and Parnell personally collected in the United States \$350,000 in aid of the prevailing distress and to expedite the L. L. movement. Within two years the L. L. was officially declared an il-

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legal organization; its meetings were proscribed and—when the members persisted in holding them—were broken up by the military and constabulary; and more than 20 Irish members of parliament were imprisoned, under a law applying only to Ireland, for public speaking and newspaper writing. In 1887 the 'Land Act of 1881' was extended to leases expiring within 99 years and to any longer lease if the court was satisfied that it was forced on the tenant. Power was given to the land courts on any proceedings for the recovery of a holding valued at not more than \$250 a year, for non-payment of rent, or any action for debt or damages against the tenant, to stay execution of an ejectment, or of a writ of *fiery facias* as against the tenant's interest in the holding, for such time as they thought reasonable: and to order that the arrears and costs, or such sum in satisfaction thereof as might be agreed on between the parties, should be paid by instalments. But, if the landlord offered to accept in full satisfaction of arrears such lesser sum as the court should think reasonable, and the tenant refused, no stay of execution should be granted. In 1888, Parnell introduced into parliament an Arrears of Rent Bill, based on the above act, but proposing to extend its provisions to civil cases for the recovery of rent and the limit of value to \$500: but the house refused his bill a second reading, though its leading provisions with modifications were subsequently embodied in the govt.'s own measure. See GLADSTONE, WILLIAM EWART: HOME RULE, in Ireland.

LANDLORD AND TENANT: relation established by contract between the owner of land or houses and a party hiring the use of such premises for a limited time. In the United States the laws of one state relating to the duties and responsibilities of these parties differ so materially from those of other states that nothing but a general outline can be given. The contract between these parties is a lease. The lease describes the property; mentions the term of proposed occupation, the amount of rent, and how it is to be paid; and contains whatever special agreements the parties may make relating to repairs, improvements, and other acts affecting the property. The rights and obligations of the parties begin when the lease is jointly signed, usually in duplicate that each may retain a copy. From the moment of occupation the rights of the landlord in the property are limited during the term of the lease to whatever privileges are stipulated in the lease, and to the protection of his reversionary interest. Unless the lease specifically gives him the privileges—which leases are generally drawn to do—the landlord cannot enter on the property, even peaceably, to ascertain whether waste or injury has been done by the tenant, to make repairs, or to collect rent, without the tenant's permission. With the signing of the lease, the responsibility of the

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landlord for injuries to others proceeding in any manner from the property is transferred to the tenant in some states, but remains with the landlord in others. The landlord is bound to pay ground rent or interest on any mortgage on the property, and is presumed to place the tenant in possession of a property in good condition and wholesome, and to protect the tenant against any annoyance by the landlord's heirs. In some places the landlord is not obliged to warrant the property fit for the purpose of the tenant, the latter, if he wants it, taking it 'as it is, for better or worse.' In others, the landlord is relieved of the duty of keeping the premises in repair. Nor is the tenant obliged to make necessary repairs. But for the preservation of the property, stipulations concerning repairs are usually made in leases, and repairs may be made by the landlord, or by the tenant with the landlord's permission. In some instances a tenant's repairs and improvements are made at his own expense; in others the landlord sanctions them and allows a reduction in the rent to cover a part or the whole of the cost. A tenant, however, is presumed to take reasonable care of leased property, and excepting natural wear and tear, to leave it in as good condition as when taken. While in some states the tenant is bound to make fair and tenantable repairs, he is in none required to do anything that will make the property better than he found it. Usually if the landlord sells a property in tenancy the sale is subject to the lease, and the tenant continues his holding under the new owner or has a claim for damages if the new owner demands possession. The various rights and liabilities are not confined to the immediate parties to the contract (lease), but become attached to all persons to whom the estate may be transferred, or who may succeed to the possession of the premises, either as landlords or tenants. The relation of landlord and tenant may be terminated by the tenant surrendering his lease to the landlord with the landlord's acceptance of it; by the tenant forfeiting the lease by a breach of some of its provisions; by the decease of the person on whose life the lease depends, in the case of a tenancy for life; by notices to quit from the landlord to the tenant, in the case of a tenancy at will or from year to year; and by the landlord ejecting the tenant. Nearly all the states in the Union now require this notice to be in writing, but there is no uniformity as to the length of the notice. The common law requirement that the notice should be given six months before the expiration of the time of the lease prevails in some of the western and middle states; and three months and one month in others. After a notice to quit has been served, the parties may renew the lease for another period, if mutually agreeable, on the same terms or others, as may be agreed to by each. See DEBTS, RECOVERY OF: DISTRESS, IN LAW: EJECTMENT, ACTION OF: FIXTURES, in LAW.

LANDON—LANDOR.

LANDON, *län'don*, LETITIA ELIZABETH (Mrs. MACLEAN), known by her initials L. E. L.: English poet: 1802, Aug. 14—1839, Oct. 15; b. Chelsea, London; dau. of an army agent. Her childhood was spent in the house of a relative in Hertfordshire. In 1820, her first poems in the *Literary Gazette* attracted considerable attention. On the death of her father, she gave her entire attention to literature, earning both fame and money. She published several volumes of verse, the most widely read and admired of which was the *Improvisatrice*; and three novels, long since forgotten. 1838, June 7, she married George Maclean, gov. of Cape Coast Castle, and was found dead in her new house in autumn of the following year. It is understood that for the alleviation of spasms, with which she was occasionally visited, she was in the habit of taking small doses of prussic acid, and her death, which there is no reason to deem other than accidental, is supposed to have been caused by an overdose. In 1841, Laman Blanchard published her *Life and Literary Remains*, 2 vols. L. E. L. might be called a sort of female Byron, if Byron be thought of chiefly as the writer of the *Corsair* and *Lara*. Her poems are altogether high flown and romantic, but they have a certain musical impulse which is pleasing.

LANDOR, *län'dér*, WALTER SAVAGE: 1775, Jan. 30—1864, Sep. 17; b. Ipsley Court, Warwickshire, England; son of Walter Landor and Elizabeth Savage. He was educated at Rugby, and at Trinity College, Oxford, quitting the univ. without a degree. He succeeded to the family estates on the death of his father. In 1808, he raised a body of men at his own expense, and joined the Spanish patriots under Blake. He was made a col. in the service of Spain, but resigned his commission on the restoration of King Ferdinand. In 1811, he married Miss Julia Thuillier of Bath. After his marriage, he resided first at Tours, then at Florence, where he bought an estate. He became known first as the author of *Count Julian*, which was followed by a poem called *Gebir*. In 1820, appeared *Idyllia Heroica* (in Latin), and 1824–29, *Imaginary Conversations of Literary Men and Statesmen* (5 vols.). L. was a thorough classical scholar, and his Greek and Roman characters speak as we should expect the ancient heroes to have spoken. He is greater as a prose writer than as a poet; but, according to Emerson, who visited him 1833, nature meant him rather for action than for literature. 'He has,' says Emerson, 'an English appetite for action and heroes.' He was master of a terse, strong, and often noble style. In 1836, he published *Letters of a Conservative*; in the same year, a *Satire on Satirists*, and *Admonition to Detractors*; in 1837, *The Pentameron and Pentologue*; in 1847, *The Hellenics*; in 1848, *Imaginary Conversations of King Carlo Alberto and the Duchess Belgioioso on the Affairs and Prospects of Italy*; in 1851, *Popery, British and Foreign*; in 1853, *Last Fruit off an Old Tree*; in 1854, *Letters of an American*.

LANDOUR—LANDSCAPE-GARDENING.

He died at Florence, Sep. 1864. His *Life and Works* were published, 8 vols., 1876, the life being by John Foster. See also Colvin's *Landor* (1881).

LANDOUR': sanitary station in British India, 1,028 m. n.w. of Calcutta, on the s. border of the protected state of Gurhwal (q.v.), 7,579 ft. above the sea. On ascending to this point from the plains, the thermometer has been known to fall from 90° to 52° F. in two or three hours. Even in June, the temperature rarely rises to 80°; while, in Jan., it averages only about 53°. Much has been done to render the place available for invalids. Barracks have been erected, as also a post-office, a church, a hospital, a hotel, a library, and many private houses. This sanitary station is accessible through proximity to two great rivers, Jumna and Ganges.

LAND-RAIL, n. *lānd'rāl*: see **RAIL** 2, and under **LAND** 1.

LANDSBERG-AN-DER-WARTHE, *lānts'bērċh-ān-dēr-rār'té*, or **LANDS'BERG**: town of Prussia, province of Brandenburg, in a pleasant and fruitful district on the Warthe, 40 m. n.e. of Frankfort. Its corn and wool markets are important; weaving, tanning, distilling, and machine-making on a large scale are carried on. Pop. (1880) 23,612.

LANDSCAPE, n. *lānd'skāp* [Dut. *landschap*; Ger. *landschaft*, a province or district: AS. *land*, land; *sceapam*, to shape or form: AS. *-scipe*, Dut. *-schap* = Eng. *ship*]: such a portion of country as the eye can view at a single glance; a delineation of the land; a picture representing rural scenery.

LAND'SCAPE-GARDENING: the art of laying out grounds in order to beauty and pleasure; fairly reckoned among the fine arts. Its happiest results are obtained, where the mere purpose of pleasing is not too much obtruded, but is seen in harmony with some other design. Much of what is known as L.-G. would more properly be called *decorative gardening*, as the word landscape involves a considerable range or distance of natural perspective unattainable in a limited garden area.

Where the general aspect of a country is wild, and has been little modified by cultivation, inclosures, and other works of man, those scenes are felt to be most pleasing which show man's progress and triumph. Thus, when pleasure-grounds first began to be laid out, they exhibited only geometric forms; and alleys, avenues, and parterres did not seem artificial enough to give delight, without buildings of various kinds, terraces, mounds, artificial hills, lakes, and streams, close-clipped hedges, and trees or shrubs trimmed by *topiarian* art into fantastic shapes, such as figures of animals, vases, and the like. The art of the *topiarius* or *pleacher*—dating from the Augustan age in Rome—is not now in repute. In districts where the general scene exhibits a succession

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of rectangular fields, and where everything shows subservience to utility, a greater irregularity gives pleasure, and the eye loves to rest on any portion of the landscape which presents the original beauties of nature. The landscape-gardener, however, must not attempt an exact imitation of nature, or to reduce everything to a state of primitive wildness. Like the painter, he must exhibit nature idealized. The introduction of water demands unusual artistic skill for its success; the mere landscape-gardener's lake or cascade is too obviously artificial. Where water is within view, it is a chief object of the landscape-gardener to arrange everything so that the view of it may be enjoyed from the windows of the mansion, or from the principal walks. Much care is given to the disposal of wood, in masses, groups, and single trees. Belts and clumps, much in vogue in the latter part of the 18th c., are now comparatively seldom planted.

The style of landscape-gardening in which regular forms prevail is called the *Geometric*; and the opposite style, from having been extensively practiced first in England, in which country, indeed, it may be said to have originated, is known as the *English*. On the continent of Europe, a pleasure-ground laid out with winding and irregular walks, and scattered trees or groups of trees and shrubs, is called an *English garden*; but many of the continental English gardens are rather caricatures of the true English style than illustrations of it. The taste of the present age rejects or admits very sparingly the grottoes, temples, statues, monuments, fountains, jets-d'eau, etc., with which it was once the fashion to fill pleasure-grounds. In the laying out of grounds, whether on a large or small scale, it is of great importance that the trees and shrubs be well chosen, and the different kinds well grouped.

LANDS'-CLAUSES ACT, in England and Scotland: statute containing a code of regulations generally inserted in all local acts where a power is given to take compulsorily a man's land for public improvements. As no man can be compelled otherwise to sell his property, a statutory power to compel him is necessary in all cases where a public undertaking, such as a railway, harbor, etc., requires it. See APPRAISEMENT.

LANDSEER, *lānd'sēr*, Sir EDWIN, R.A.: English painter: 1802, Mar. 7—1873, Oct. 1; b. London; son of John L., eminent engraver. He was carefully trained by his father, who used to take him when a child to Hampstead Heath, and accustom him to sketch animals from life. The first work of L.'s that brought him prominently before the public was *Dogs Fighting*, exhibited 1819. It was succeeded by *Dogs of St. Gothard* (1819), the popularity of which was very great. The scene of several of his finest pictures is in the Highlands of Scotland. For more than 30 years, every London exhibition has witnessed

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his success. In 1827 he was elected a R.A., and in 1850 he was knighted. Among his most celebrated achievements are: *The Return from Deer-stalking*, *The Illicit Whisky-still*, *High Life*, *Low Life*, *Poachers Deer-stalking*, *Bolton Abbey in the Olden Time*, *The Drover's Departure*, *Return from Hawking*, *The Old Shepherd's Chief Mourner*, *Dignity and Impudence*, *Peace*, *War*, *Stag at Bay*, *The Drive—Shooting Deer on the Pass*, *The Random Shot*, *Night*, *Morning*, *The Children of the Mist*, *Saved*, *Highland Nurses*, *Deer-stalking*, and *Flood in the Highlands* (1861), and more recently, *Windsor Park*, *Squirrels Cracking Nuts*, and *Man proposes, but God disposes*. L. was elected pres. of the Royal Acad. 1866, but declined. L. is reckoned the most superb animal-painter of his time.—L. had two elder brothers also artists: THOMAS L., one of the best engravers of his time; and CHARLES L. (1799–1879), painter of historical scenes and figure subjects.

LAND'S END: see CORNWALL.

LANDSFELDT, Countess of: see LOLA MONTEZ.

LANDSHUT, *lânts'hôt*: ancient and picturesque German town, of Upper Bavaria, in a pleasant and fertile district on the Isar, 39 m. n.e. of Munich. Its streets are rich in quaint old gables, and there are numerous towers; that of St. Martin's Church (Gothic, dating from 1450) is 420 English ft. in height. L. contains 36 breweries, and has manufactures of woolen cloth, leather, hosiery, and tobacco. In 1826, the univ., removed hither from Ingolstadt 1800, was transferred to Munich. The castle of Trausnitz, long the residence of the Dukes of Bavaria, is supposed to have been originally a Roman station. During the Thirty Years' War, and the War of the Austrian Succession, L. was an important fortress, and the scene of many conflicts. It is called sometimes Dreihelm-Stadt. Pop. (1880) 17,225.

LANDSKRONA, *lânds'krô-nâ*: fortified seaport town of Sweden, on a tongue of land which projects into the sound, 18 m. n.n.e. from Copenhagen. The harbor is very good. Ship-building is carried on. Corn, fish, tar, pitch, timber, and alum are principal exports. Pop. (1878) 9,219.

LANDSLIP: large portion of land which from some cause becoming detached from its original position, slides down to a lower level. Landslips are common in volcanic districts, where the trembling of the earth that frequently accompanies the eruption of a volcano is sufficient to split off large portions of mountains, which slide down to the plains below. Water is another great agent in producing landslips. It operates in various ways: the most common is when water insinuates itself into minute cracks, which are widened and deepened by its freezing in winter. When the fissure becomes sufficiently deep, when the ice melts, a landslip is produced. Sometimes, when the strata are very much inclined, and

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rest on a bed susceptible of absorbing water and thus becoming slippery, the superincumbent mass slides over it to a lower level. This occurred on a large scale in Dorsetshire, England, between Lyme and Axminster 1839, an unusually wet season: a mass of chalk and greensand here slid over the slippery surface of a bed of liassic clay down into the sea. Of a like kind was the slip of the Rossberg, Switzerland, 1806 (see GOLDAU); and that which overwhelmed the village of Elm, in Glarus, 1881, Sep., about 200 lives being lost. Landslips of a different kind have been produced in peat-mosses, which becoming by heavy rains thoroughly saturated with water, have burst their natural boundaries, and discharged themselves on a lower level. The most remarkable case of this kind is that of the Solway Moss, which, 1772, owing to rains, spread itself in a deluge of black mud over 400 acres of cultivated fields. In 1880, a most destructive landslip occurred at Naini Tal, an Anglo-Indian health-resort on the slopes of the Himalaya. The town was partly built on a great sloping terrace of shaly deposit overhanging the lake, and this becoming saturated with the heavy autumn rains, it suddenly slipped forward, burying many houses in its debris. 40 Europeans, and 100 to 200 natives, lost their lives.

LANDSTURM, n. *lânt'stôrm* [Ger. *land*, land, country; *sturm*, storm, alarm]: in *Prussia*, a general levy of the people for war; the last reserve: see LANDWEHR.

LAND'-SURVEYING: art of measuring the area of a portion, small or large, of the earth's surface; an important application of mathematics, involving thorough acquaintance with geometry, trigonometry, and the theory and use of the instruments employed for determination of angles. Fields or portions of ground of small extent are measured easily and with sufficient accuracy by a chain (for distances), and a box-compass or cross-staff (for angles). For larger areas, the use of the surveyor's table is requisite; and for those of still greater extent, in which the greatest accuracy is requisite in the determination of the angles, there is use for the astrolabe, theodolite, sextant, circle, reflector, micrometer, etc. The surface to be measured is divided into triangles, which are separately measured and calculated; but when a large extent is included in the measurement, it is not enough to proceed from one triangle to another, in which way an error at the outset may be propagated with continual increase; but a base line, as long as circumstances admit of, must, in the first instance, be accurately measured, upon which, by means of the measurement of angles, all the subsequent calculations are made to depend, and lines subsequently measured are intended only to be corrective of the results obtained by calculation. When the extent of surface is still greater, as when a whole country is to be measured, points here and there are as-

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tronomically determined, their meridians are accurately laid down, and a complicated system of triangles is employed to insure accuracy; this is called *Triangulation* (q.v.).

LAND'-TAX: tax imposed on land and houses for revenue, instead of the ancient subsidies, scutages, tilliages, tenths, fifteenths, and such occasional taxes. In England, from a very early period to the middle of the 17th c., parliament had provided for the extraordinary necessities of the govt. chiefly by granting subsidies, raised by an impost on the people in respect of their reputed estates. Landed property was the chief subject of taxation, and was assessed nominally at 4s. in the pound. But this assessment was made in such a way that it did not rise with the value of land, but dwindled away to about 2*d.* in the pound. The long parliament devised a more efficient plan by fixing the sum to be raised, and then distributing it among counties according to their supposed wealth, leaving them to raise it by a rate. In 1692, a new valuation of lands was made, and it was found that a tax of 1s. per pound would yield half a million. In war, this was raised to 4s. In 1798, the parliament relieved itself of the trouble of every year passing an act, and a general act was passed, permanently fixing the land-tax at 4s. in the pound. This act (38 Geo. III. c. 60) enabled the landlord to redeem the tax, and accordingly, since that time, a great part of it has been redeemed, only about one million being unredeemed. Though the act of 1798 directed the tax to be assessed and collected with impartiality, this provision was not carried out, but the old valuation of 1698 was acted on, and in modern times the greatest possible inequality prevails. If the tax is in arrear, the tenant is liable to a distress; but the tenant may deduct it from the next rent that he pays. The tax, though nominally chargeable on the landlord, falls neither on the landlord nor the tenant, but on the beneficial proprietor, as distinguished from the tenant at rack-rent; for if the tenant has sublet, and has a beneficial interest, he pays *pro tanto* the tax, charging the residue on the landlord. The proportion of land-tax fixed on Scotland was £47,954, and a proportion was fixed on each county, the commissioners having power to amend the valuation.

LAND'-TRANSPORT CORPS: see **MILITARY TRAIN.**

LANDWEHR, n. *lānt'vār* [Ger. *land*, land, country; *wehr*, defense]: military force in the German and Austrian empires, somewhat corresponding to the militia (q.v.) of Great Britain and the United States; the national guard. It is not always retained under arms. During peace, its members spend most of their time in civil pursuits, and are called out for military service only in times of war or of commotion—care being taken, however, that they are sufficiently exercised. The name **L.** was applied first to the Tyrolese who rose against the

LANE.

French; and 1805 a similar force was raised in the other German provinces of Austria. The L. of Austria-Hungary is now like that of Germany—an army reserve. By far the most elaborate and complete system of land-defense was the Prussian, called into existence 1813, when all Germany rose against Napoleon. As early, indeed, as 1806, or earlier, Marshal Knessebeck, then major in the Prussian army, had proposed such a thing; but it was not till the opening of the campaign of 1813 that the Prussian L. was organized according to Scharnhorst's plan by a royal edict, Mar. 17. At first, it was designed solely as a land defense, properly so called, and not, what is now the case, as an integral part of the regular army. It was called out in two separate levies, the first comprising all men from 26 to 32 years of age, and the second those from 32 to 39. The older men up to 60 belonged to the *Landsturm*, which was called out only for the defence of house and hearth.

After the second Peace of Paris appeared the *Landwehrordnung* (Landwehr-regulation) of 1815, Apr. 21, according to which the country was divided into 104 districts, each of which had to furnish a battalion of L. To every battalion of L. was attached a squadron of uhlans; three battalions formed a regt.; two regts. a L. brigade, which with the brigades of cavalry and infantry, was placed under a gen. of division. By the constitution of 1871, Apr., the Prussian obligation to serve in the army was extended to the whole German empire. Every German capable of bearing arms, after serving in the standing army for seven years, has to enter the L., and remain in it for other five years.

LANE, n. *lān* [Dut. *laen* or *laan*, an alley: Scot. *loan*, an opening between fields left uncultivated: Gael. *lon*, a meadow; Dan. *laane*, a bare place in a field]: a narrow way between hedges; any narrow road or street; a narrow passage.

LANE, *lān*, JAMES HENRY; 1814, June 22—1866, July 11; b. Lawrenceburg, Ind.: lawyer. He was admitted to the bar 1840; was commissioned col. of the 3d Ind. vols. raised for the Mexican war 1846; commanded a brigade at the battle of Buena Vista; was col. of the 5th Ind. regt. 1847-8; lieut.gov. of Ind. 1848; and member of congress 1853-55. In 1855 he removed to Kan., where he became conspicuous in the first free state govt., pres. of the Topeka and Leavenworth constitutional conventions, and maj.gen. of the free state militia. He fought the Mo. invaders, was elected by the free state legislature U. S. senator (1856), but was not seated—his election being held not valid by congress—and being indicted for treason by the pro-slavery party, he was compelled to flee the territory. On the admission of Kan. into the Union (1861) he was chosen U. S. senator, and was re-elected 1865. During the war he was brig.gen. of volunteers, and in command of a bri-

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gade of Kansas soldiers defeated the Confederates in several conflicts. His death was by suicide under temporary aberration of mind occasioned by an attack of paralysis.

LANFRANC, *län'fränk*: Abp. of Canterbury; most eminent of the foreign churchmen who rose to distinction in the mediæval Church of England: abt. 1005–1089, May; b. Pavia, of noble family. He was educated partly at Pavia, partly at Bologna, for the profession of the law. For a time he was an advocate at Pavia; but in the hope of greater distinction, he removed to France, and founded at Avranches a school of law, which soon became one of the most popular in France. Having been waylaid and almost murdered by robbers during one of his journeys to Rouen, he was carried to the monastery of Bec, where he was treated with much tenderness; and the deep religious impressions there received determined him to abandon the world and become a monk. He was soon (1041) chosen prior of the monastery; and his reputation for piety, as well as the fame for theological learning which he acquired, especially in his controversy on the Eucharist with Berengar, led to his translation 1062 to the more important monastery of St. Stephen, at Caen, recently founded by William, Duke of Normandy. Having had the confidence of that prince for many years, he was selected by him, after the conquest of England, to fill the primatial see of Canterbury, accepting with reluctance 1070. He entered zealously into the policy of his sovereign; and under his spiritual rule the Church of England received as strong an infusion of the Norman element as was forced on the political system of England by the iron hand of the Conqueror. L. outlived William; and to his influence the historians mainly ascribe the peaceful submission with which that monarch's successor, Rufus, was accepted by the kingdom, as well as the comparative moderation of the earlier years of Rufus's reign. The tyranny which has made the name of Rufus odious dates mainly after the death of L., which occurred in his 84th year. His chief writings are—Commentaries on the Epistles of St. Paul, the Treatise against Berengar, and Sermons. His letters, however, are very interesting. The first complete ed. of his works is that of D'Achery (fol. Paris 1648). They are found also in the *Bibliotheca Patrum*. See Milman's *Latin Christianity*, III. 438–440, also Dr. Hook's *Lives of the Archbishops of Canterbury*, II. (1861).

LANGDON, *läng'don*, **JOHN**, LL.D.: 1741, June 25—1819, Sep. 18; b. Portsmouth, N. H.: statesman. He received a common-school education, and engaged in mercantile business. In 1774 he aided in removing the military stores from Fort William and Mary in Portsmouth harbor; 1775 was elected delegate to congress; 1776 became naval agent; 1777 was speaker of the N. H. assembly, and gave the money that equipped Gen. John

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Stark's famous brigade; commanded a vol. company at Saratoga and in R. I.; and 1779 was continental agent in N. H., and pres. of the state convention. He was re-elected delegate to congress 1783: served frequently as member and speaker of the N. H. legislature: was a member of the federal constitutional convention 1787: gov. of N. H. 1788, 1805-9, 1810-12: and U. S. senator 1789-1801. He declined the office of sec. of the navy, and 1812 the nomination for vice-pres. of the United States.

LANGDON, SAMUEL, D.D.: 1723, Jan. 12—1797, Nov. 29; b. Boston: Congl. minister. He graduated at Harvard College 1740: studied theol. while master of a grammar school in Portsmouth, N. H., served as chaplain in the Louisburg expedition 1745; was pastor of the North Congl. Church at Portsmouth, N. H. 1747-74, became pres. of Harvard College 1774, and served till 1780; was pastor of the Hampton Falls Congl. Church, N. H., from 1781 till his death; and was a member of the state convention that ratified the federal constitution 1788. He was a founder of the American Acad. of Arts and Sciences, and received the degree D.D. from Aberdeen Univ. 1762.

LANGE, *lâng'èh*, JOHANN PETER, D.D.: 1802, Apr. 10—1884, July 8; b. Sonnborn, Prussia: theologian. He was brought up on a farm; showed a great passion for reading; studied at the Düsseldorf Gymnasium 1821-2 and the Univ. of Bonn 1822-25; was asst. minister at Langenberg 1825-6; and Reformed pastor at Wald 1826, Langenberg 1828, and Duisburg 1832. In 1841 he was appointed prof. of theol. in the Univ. of Zurich, and held the office till 1854, when he became prof. of systematic theol. at the Univ. of Bonn. He became counselor of the consistory 1860, and continued his writing and lecturing till within a week of his death. Of his numerous and important works the best known are: *Leben Jesu*, 3 vols. (Heidelberg 1844-47), prepared as a refutation of Strauss's celebrated work: *Die Christliche Dogmatische*, 2. vols. (1849-52): and *Theologisch-homiletisches Bibelwerk* (Bielefeld 1857-76), of which the New Test. was comprised in 16 parts (1857-71) and the Old Test. in 20 (1865-76); the whole being translated, enlarged, and adapted under the editorship of the Rev. Philip Schaff, D.D., LL.D., and entitled *Critical, Doctrinal, and Homiletical Commentary on the Holy Scriptures*, (New York, begun 1864).

LANGÈLAND, *lâng'è-lând* (*long land*): Danish island, at the s. entrance to the Great Belt between Fuhnen and Laaland; 33 m. long, and about 3 m. in average breadth; about 100 sq. m. It consists of a range of low hills, is very fertile in soil, and is well wooded. Grain, peas, butter, and cheese are largely produced. Rudkjøbing, pop. (1880) 3,179, on the w. coast, is the only town.—Pop. of L 17,100.

LANGENBECK—LANGR

LANGENBECK, *lâng'én-běk*, **BERNARD VON**: German physician and surgeon, prof. of surgery in the Univ. of Berlin, director of the Royal Clinical Hospital, and general staff physician of the army: cousin of the famous surgeon Max L. of Göttingen. He was appointed 1847 successor to the great operator, Dieffenbach, in Berlin, and soon acquired equal celebrity, especially for skill and success in the operation for harelip, and in the replacement of noses, eyelids, and lips. He earned great reputation through his execution of the operation of Resection (q.v.), in which the diseased or injured part only of a bone is removed, instead of the whole limb perhaps being amputated. During the late wars in Germany, a great field opened itself for this kind of operation, and hundreds of the wounded who came under the knife of L. have to thank him for the preservation of their limbs. On account of his eminent services, he was ennobled, and received the highest medical rank in the Prussian army. L. is eminently tender and sympathetic with his patients. As a teacher, he is highly successful; and the Clinical Hospital in Berlin, under his personal direction, is the resort of patients from all parts of the world.

LANGENBIELAU, *lâng-én-bě'low*: group of nine contiguous villages in Prussian Silesia, 33 m. s.w. of Breslau. The people are employed in linen, cotton, and other manufactures, sugar-refining, and dyeing.—Pop. abt. 15,000.

LANGENSALZA, *lâng-én-sâlt'sâ*: town of the Prussian province of Saxony, with considerable manufactures. Here, 1866, June, in an encounter between the Hanoverians and a body of Prussians, the latter were at first defeated, but being reinforced compelled the former to capitulate. Pop. (1875) 9,888.

LANGHOLM, *lâng'ûm*: burgh of barony and market-town in Dumfriesshire, Scotland, at the junction of the Ewes, the Wauchope, and the Esk, about 30 m. e. of the county town, 8 m. n. of the English border. There are factories in the town, whose staple manufactures are woollen yarns, and a woollen cloth called Tweed, for which the town is noted. Dye-works are also in operation. Pop. (1871) 3,275; (1881) 4,209.

LANG'LAND (or **LANG'LEY**), **WILLIAM**: see **PIERS PLOWMAN**.

LANGNAU, *lâng'now*: town of the canton of Bern, Switzerland, 15 m. e. from Bern, in the Emmenthal; on the Ilfis, a branch of the Emmen. There is some weaving, and L. is the principal mart for the cheese and linen thread of the Emmenthal. Pop. 7,000.

LANGRES, *lôngr*: manufacturing town of France, dept. of Haute-Marne, 1,408 ft. above sea-level, 20 m. s.e. of Chaumont. Here cutlery of the finest quality is manufactured, and there is trade in grain, lint, cattle, and sheep. It is said to have been the see of a bishop since

LANGSAT—LANGTON.

the 3d c., and possesses a cathedral of the 11th c. L., the ancient Andomatunum, was in the time of Cæsar the cap. of the Lingones, a name corrupted into Langres. Pop. abt. 10,000.

LANG'SAT, or LAN'SEH: see MELIACEÆ.

LANGSTON, JOHN MERCER, LL.D.: educator: b. Louisa Courthouse, Va., 1829, Dec. 14. He was born a slave; was emancipated when 6 years old; graduated at Oberlin College 1849 and at its theol. school 1853; studied law and was admitted to the bar in O. 1854; practiced law until 1869; and was prof. of law in Howard Univ., Washington, 1869-77, and dean of the law faculty and vice-pres. and acting pres. of the univ. during part of that time. In 1871 he was appointed by Pres. Grant a member of the board of health of the D. C.; in 1875 was elected its sec.; in 1877-85 was U. S. minister and consul-gen. to Hayti; and since 1885 has been pres. of the Va. Normal and Collegiate Institute at Petersburg. In 1888 he was a republican candidate for congress, and though the gov. gave the certificate of election to one of his two opponents, L. claimed to have been elected and gave notice of his intention to contest the seat. Beside many lectures, addresses, and special papers, he has published *Freedom and Citizenship* (Washington, 1883). Dr. L. is an able writer and public speaker.

LANGSYNE, n. and ad. *lång-sîn'* [Scot.]: time long ago; long since. AULD LANGSYNE, *awld*, a famous Scotch song.

LANGTON, *lång'ton*, STEPHEN, Cardinal, Abp. of Canterbury: abt. 1150-1228, July 9; b. probably in Lincoln, or Devonshire: celebrated in the history of the liberties of England. He received his education chiefly in the Univ. of Paris, where he was fellow-student and friend of Innocent III.; and having completed his studies, he rose through successive grades to the office of chancellor of the university. After the elevation of Innocent, L., having visited Rome, was named to the cardinalate by the pope; and, on occasion of the disputed election to the see of Canterbury, he was recommended to those electors who had come to Rome on the appeal, and having been elected by them, was consecrated by Innocent himself at Viterbo, 1207, June 27. His appointment, nevertheless, was resisted by King John; and for six years, L. was excluded from the see, to which he was admitted only on the adjustment, 1213, of the king's dispute with Innocent through the legate Pandulf: see INNOCENT III. This reconciliation, however, was but temporary. In the conflict of John with his barons, L. was a warm partisan of the barons, and his name is the first of the subscribing witnesses of Magna Charter. When the pope, acting on the representation of John, and espousing his cause as that of a vassal of the holy see, excommunicated the barons, L. refused to publish

LANGTRY—LANGUED.

the excommunication, and was in consequence suspended from his functions 1215. He was restored, however, probably, in the following year; and on the accession of Henry III., he was reinstated (1218) in his see of Canterbury, from which time he occupied himself chiefly with church reforms till his death. L. was a learned and successful writer, but his writings are lost, and the chief trace which he has left in sacred literature is the division of the Bible into chapters, which is ascribed to him. Giraldus Cambrensis (q.v.) dedicated several of his books to Langton.—See Wharton's *Anglia Sacra* I., II.; Lingard, II.; Milman's *Latin Christianity*, IV.; and Dr. Hook's *Lives of the Archbishops of Canterbury*, II. (1861).

LANGTRY, *läng'trī*, EMELIE CHARLOTTE LE BRETON: actress: b. Isle of Jersey, 1852: daughter of the Very Rev. William C. Le Breton, dean of Jersey. She married Edward L. 1874, became a 'professional beauty' in London, gained the friendship of the Prince of Wales, and made her first appearance on the stage in London as Miss Hardcastle in *She Stoops to Conquer* 1881, Dec. 15; and in New York as Hester Grazebrooke in *An Unequal Match*, 1882, Nov. 6. She has since studied hard, enlarged her repertory, created several new parts, renounced British allegiance and taken steps to acquire American citizenship, and 1889, Nov., was playing in Edinburgh, and was under contract to produce *Twixt Axe and Crown* in London, 1890, Jan. 1.

LANGUAGE, n. *läng'gwāj* [F. *langage*—from *langue*, a tongue, language—from L. *lingua*, the tongue]: the expression of ideas by means of words; human speech; style or manner of expression; the speech peculiar to a nation.—SYN.: tongue; speech; dialect; idiom; diction; phraseology; style.

LANGUAGE: see PHILOLOGY.

LAN'GUAGE, DISEASE OF THE FACULTY OF: see LOGOMANIA.

LANGUED, *längd*, or LAMPASSE, *läng-pās-sā'*, in Heraldry: term applied to an animal whose tongue is of different color from his body: the animal is said to be *langued* of that color. It is understood in England that unless the blazon direct otherwise, all animals are langued gules whose tincture is not gules, and an animal gules is langued azure. This rule does not hold in Scottish Heraldry, where, 'when the tongue, teeth, and claws are of different tinctures from their bodies, they are to be mentioned as armed and langued of such a tincture.'—*Nisbet*. When a beast or bird is represented without teeth or claws, this is expressed in blazon 'sans langue and arms.'

LANGUEDOC—LANIARD.

LANGUEDOC, *lǝng-gěh-dok'*: name in the middle ages, and till the French Revolution, for a province in s. France, bounded n. by Auvergne and Lyonnais; e. by the river Rhone; s. by the Mediterranean and the counties of Foix and Roussillon; w. by Gascony and Guienne. It was traversed through its whole length, n.e. to s.w., by the Cevennes (q.v.). L. is now divided into the depts. of Lozère, Gard, Ardèche, Aude, Hérault, Upper Loire, Tarn, and Upper Garonne. The cap. of L. was Toulouse. The name is derived from that of the southern French dialect, or Provençal, called *langue d'oc*, while the northern was called *langue d'oui* or *langue d'oïl*, because in the former the word *oc* (an abbreviation of the Lat. *hoc*) was used for *yes*, and in the latter *oil* or *oui* (from Lat. *hoc illo*).

LANGUID, a. *lǝng'gwīd* [L. *languidus*, faint, drooping—from *languēō*, I am faint: It. *languido*]: faint; weary; exhausted; drooping; without animation or activity. **LAN'GUIDLY**, ad. -*lī*. **LAN'GUIDNESS**, n. -*nēs*, weakness from exhaustion.—**SYN.** of 'languid': heavy; slow; feeble; weak; sickly; pining.

LANGUISH, v. *lǝng'gwīsh* [F. *languissant*, languishing—from L. *languesco*, I become faint or languid (see **LANGUID**)]: to lose strength or animation; to look with softness or tenderness; to pine; to become feeble or spiritless; to grow dull. **LAN'GUISHING**, imp.: **ADJ.** losing strength; pining; showing a languid appearance: **N.** feebleness; loss of strength. **LAN'GUISHED**, pp. -*gwīsh*t. **LAN'GUISHINGLY**, ad. -*lī*. **LAN'GUISHMENT**, n. -*mēnt*, the state of languishing or pining; softness of look with the head reclining to one side.—**SYN.** of 'languish': to droop; faint; wither; fade.

LANGUOR, n. *lǝng'gwēr* [L. *languor*, faintness—from *languēō*, I am faint: It. *languore*: F. *languueur*]: the condition or feeling induced by exhaustion of strength; faintness; weariness; lassitude. **LANGUOROUS**, a. *lǝng'gwēr-ūs*, in *OE.*, tedious; melancholy.—**SYN.** of 'languor': feebleness; weakness; dulness; listlessness.

LANIADÆ, *la-nī'a-dē*: family of birds, generally ranked, as by Cuvier, in the order *Insessores*, sub-order *Dentirostres*, but allied to *Accipitres*. They are the largest and most rapacious of the *Dentirostres*, preying on small birds, quadrupeds, and reptiles, as well as on large insects. Many of them have the curious habit of impaling their prey on thorns, after which they pull it in pieces, and devour it at leisure. They have a short, strong, abruptly hooked bill, with a notch or tooth on each side, and sharp claws. The Shrikes (q.v.), or Butcher-birds, are the type of the family; but it is united by numerous links to the family of the *Muscicapidæ*, or Fly-catchers, and the limits of the two families are uncertain.

LANIARD: see **LANYARD**.

LANIARIES—LANKÂVATÂRA.

LANIARIES, n. plu. *lăn'î-âr-îz* [L. *lanîarĕ*, to tear or rend]: the long, sharp, pointed teeth placed behind the incisors; the canines. LAN'IARY, a. *-î-âr-î*, lacerating or tearing, as *laniary teeth*. LAN'IAR'IFORM, a. *-âr'î-fawrm* [L. *forma*, shape]: shaped like the canine teeth of carnivorous animals.

LANIER, *lăn'é-êr*, SIDNEY: 1842, Feb. 3—1881, Sep. 7; b. Macon, Ga.: author. He graduated at Ogelthorpe College, Ga., 1860; entered the Confederate army, 1861, Apr.; took part in the seven-days' fight near Richmond; was transferred to the signal service; served in Va. and N. C.; and while commanding a blockade-runner was captured, and for five months imprisoned at Point Lookout, Fla. After the war he was principal of the Prattville Acad., Ala.; practiced law with his father in Macon, 1868-72; wrote the words of the cantata for the opening of the Centennial Exhibition 1876; and became a lecturer on English literature in Baltimore 1877. In 1879 he was appointed lecturer on that subject in Johns Hopkins Univ. His publications include *Tiger-Lilies* (1867); *Florida* (1876); *Poems* (1877); *The Boy's Froisart* (1878); *Science of English Verse* (1880); *The Boy's King Arthur* (1880); *The Boy's Mabinogian* (1881); *The Boy's Percy* (1882), and *The English Novel and the Principles of its Development* (1883). His verse is a musical flow of singularly refined and elevated thought.

LANIFEROUS, a. *lăn-îf'êr-ûs* [L. *lanĭfer*, producing wool—from *lana*, wool; *fero*, I produce]: bearing or producing wool. LANIG'EROUS, a. *-îf'êr-ûs* [L. *gero*, I bear]: producing or bearing wool.

LANK, a. *lăngk* [AS. *hlanc*, slender: Dut. *slank*; Ger. *schlank*, slender, pliant: Dut. *lank*, the soft boneless part of the side]: thin; slender; not plump; not full and firm: V. in OE., to become thin; to fall away. LANK'ING, imp. LANKED, pp. *lănkt*. LANK'LY, ad. *-lĭ*. LANK'NESS, n. *-nĕs*, or LANK'INESS, n. *-î-nĕs*, leanness; flabbiness. LANKY, a. *lăngk'î*, tall and thin.

LANKÂ: ancient name of the cap. of Ceylon. In Hindu mythology, it is renowned as the chief city of the giant Râvana (q.v.), who, by carrying off Sítâ, the wife of Râma, caused the conquest of Ceylon by the latter personage, who is considered an incarnation of the god Vishn'u.

LANKÂVATÂRA: name of one of the chief religious works of the Buddhists. It treats of their religious law, and of some of their more abstruse philosophical problems. See E. Burnouf, etc., and W. Wassiljew, etc., as named under LALITA-VISTARA.

LANMAN—LANNER.

LANMAN, *lăn'man*, CHARLES: author: b. Monroe, Mich., 1819, June 14. He received an academical education; engaged in journalism 1845-49; was appointed Librarian in the war dept. at Washington 1849; resigned to become Daniel Webster's private sec. 1850; was librarian of the interior dept. 1855-57, and of the house of representatives 1866; and American sec. of the Japanese legation 1871-82. He was for many years American correspondent of the *Illustrated London News* and the *London Athenæum*; was elected an associate of the National Acad. of Design 1846; and has since produced and exhibited many landscape paintings; and among numerous publications has compiled *Dictionary of Congress* (1858, 62-64, 68-69); *Resources of America*, for the Japanese govt. (1872); *Biographical Annals of the Civil Government of the United States* (1876, 87) and *Leading Men of Japan* (1883).

LANMAN, JOSEPH: 1811, July 11—1874, Mar. 13: b. Norwich, Conn.: naval officer. He entered the U. S. navy as midshipman 1825, Jan. 1.; was promoted passed midshipman 1831, lieut. 1835, commander 1855, capt. 1861, commodore 1862, and rear-admiral 1867; and was retired 1872, May. He commanded the frigate *Minnesota* of the N. Atlantic blockading squadron 1864-5, and the second div. of Admiral Porter's squadron in the two attacks on Fort Fisher; and after the war was commandant of the Portsmouth navy-yard and commander of the S. Atlantic squadron.

LANNER, n. *lăn'nér* [OF. *lanier*—from L. *lanīārē*, to tear or rend], (*Falco lannarius*): species of falcon, val-



Lanner (*Falco lannarius*).

ued in the days of falconry for flying at the kite. The female only was called a L., in the language of falconry; the male, being smaller, a LAN'NERET.

LANNES—LANSLOWNE.

LANNES, *lân*, JEAN, Duke of MONTEBELLO: Marshal of the French empire: 1769, Apr. 11—1809, May 31; b. Lectoure. He entered the army 1792, and soon rose to high military rank. He rendered Napoleon important service on the 18th Brumaire, and received his highest favor; 1800, June 9, he won the battle of Montebello, whence his title. He bore a principal share in the battle of Marengo, and commanded the left wing at Austerlitz. He served in the campaign against Prussia 1806, commanded the centre at Jena, and distinguished himself at Eylau and Friedland. Being sent to Spain, he defeated General Castaños at Tudela, 1808, Nov. 22, and took Saragossa. In 1809, he again served on the Danube, and commanded the centre at Aspern (May 22), where he had both his legs carried away by a cannon-shot. He was removed to Vienna, and died there, and was interred in the Pantheon, Paris.

LANNION, *lân-nê-ông'*: town and river-port of France, dept. of Côtes-du-Nord, on the Guer, about seven m. from the mouth of that river. Its trade is chiefly in deals, Bordeaux wine, and colonial produce. Pop. 7,000.

LANOLINE, *lân'o-lên* or *lin*, or WOOL-FAT: recent substitute for vaseline, on which it is said to be an improvement; extracted from sheep's wool.

LA NOUE, *là nô'*, FRANÇOIS DE (surnamed BRAS-DE-FER): Huguenot soldier: 1531–91, Aug. 4; b. near Nantes; of an ancient Breton family. At the age of 18 he was at the court of Henry II. He became a Protestant, served under the great Condé, gaining from friends and foes the highest admiration for courage, humanity, honor, and purity. In 1567, at the head of 15 cavaliers, he captured Orleans. He won his soubriquet 'Iron-Arm' from the limb that took the place of his left arm shattered by a bullet at the siege of Fontenay 1570. When war between the Huguenots and the Rom. Catholics was plainly inevitable, he resigned his royal commission and took the Huguenot side, acting as gen. of La Rochelle. After the peace he went to aid the Protestants of the Netherlands, took several towns and captured Count Egmont, 1580. Later falling into the hands of the Spaniards, he was imprisoned five years, during which time he wrote *Discours Politiques et Militaires* (1587); this was translated into several languages, and with other writings gives him rank among statesmen. In 1589 he returned to his command in the French army, did brilliant service in many battles and sieges, and died of a wound received at the siege of Lamballe.

LANSLOWNE, *lânz'down*, HENRY PETTY-FITZMAURICE, third Marquis of: English statesman: 1780, July 2—1863, Jan 31; b. Lansdowne House, London. His father, William Petty L., the celebrated Earl of Shelburne (q.v.), was premier to George III., and received the coronet of a marquis 1784. L. (then Lord Henry Petty) was a

LANSDOWNE—LANSING.

younger son, and was sent to Westminster School, and afterward to Edinburgh, then the school of the young whigs destined for political life. He took his degree at Trinity College, Cambridge, 1801, and when barely of age, entered parliament as M. P. for Calne. He turned his attention to finance; and on Pitt's death, he became, at the age of 25, chancellor of the exchequer, in the administration of Lord Grenville. In 1809, he succeeded his half-brother in the marquise, became one of the heads of the liberal party in the house of lords, and during a long opposition, consistently advocated those various measures of progress which he lived to see triumphant. When the whigs, after their long exclusion from power, came into office with Earl Grey at their head, L. became lord pres. of the council, which post he held 1830, Nov.—1841, Sep., with a brief interval; resuming it 1846, after the fall of the Peel ministry, and again filling it until 1852. He then formally bade farewell to office, and resigned the leadership of the house of lords; but consented to hold a seat without office in the Aberdeen cabinet, and again in the first administration of Lord Palmerston. After the death of the Duke of Wellington, he became the patriarch of the upper house, and the personal friend and adviser of the queen. He had a keen relish and a cultivated taste for literature, and was the generous patron of men of letters. He formed a splendid library, and one of the noblest collections of pictures and statuary in the kingdom. He refused a dukedom, and might more than once have been prime minister. He died at Bowood.

LANS'DOWNE, WILLIAM PETTY, first Marquis of: see SHELBURNE, Earl of.

LANSING, *län'sing*: city in Ingham co., Mich.; cap. of the state; at the confluence of Grand and Cedar rivers, 85 m. w.n.w. of Detroit, 208 m. e.n.e. of Chicago; at the junction of the Detroit L. and Northern, the N. W. Grand Trunk, the Jackson L. and Saginaw railroads, and a branch of the Mich. Southern railroad. It is the centre of a fertile and populous district, with abundant supplies of timber and coal. A variety of important manufacturing establishments use the water power of the rivers. The streets are broad and regularly laid out; and iron and wooden bridges span the rivers. The public schools are excellent, and there are good public libraries: the state library contains more than 40,000 vols. L. is the seat of the state reform school, school for the blind, and the State Agricultural College endowed by congress with a grant of 240,000 acres of public lands, and opened 1857: it had (1880-1) 23 members in the faculty and 221 students. Here is also the Mich. Homœopathic College, open to both sexes. L. has 2 national banks (cap. \$285,600) and 2 state banks (cap. \$114,000). The leading manufacture is of agricultural implements; carriages and steam-engines also are extensively made, and there are several large flouring mills.

LANSEINGBURGH—LANTERN-FLY.¹

L. was made the cap. 1847, when its site was a forest; it was incorporated as a city 1859. The state capitol was built at a cost of \$1,500,000. Pop. (1870) 5,241; (1880) 8,319; (1884) 9,774.

LANSEINGBURGH, *län'sing-bèrg*: village in Rensselaer co., N. Y., on the e. bank of the Hudson, 3 m. from Troy, nearly opposite Waterford, which is connected with it by a bridge. The leading manufacture is of brushes, which find a market in various parts of the country: crackers and oil-cloth are largely made. L. has 1 state bank (cap. \$50,000), and 1 private bank. The village was organized 1774, and named from one of the first settlers (1771) Abraham J. Lansing. The *Gazette*, established 1798, is one of the oldest newspapers published in the state. Pop. (1870) 6,372; (1880) 7,432.

LANSEQUENET, n. *län'skë-nët* [F.—from Ger. *lands-knecht*, a foot soldier; Ger. *land*, land, country; *knecht*, knight]: German common soldier, originally one belonging to the infantry; afterward a soldier who gave his services to any one who paid highest. The name became corrupted into lance-knight; a game at cards.

LANTERN, n. *län'tèrn* [F. *lanterne*—from L. *laterna*, a lantern: as if from AS. *leoht*, light, and *ern*, place]: a transparent case with perforations for a candle or lamp; the upper part of a lighthouse; in *arch.*, any erection, usually ornamental, on the top of a building or dome to give light, ventilation, or completeness. Where a lantern is for the purpose of giving light, it is called a *lantern-light*. In Gothic architecture, a *lantern-tower* is frequently placed over the centre of cross churches—the vault being at a considerable height, and the light admitted by windows in the sides. York and Ely cathedrals, and many churches in England, have such lantern-towers. **MAGIC-LANTERN**, an optical instr. by means of which small figures painted with transparent varnish, variously colored, on slides of glass, are very largely magnified, seen in a darkened room on a wall or white screen. **DARK-LANTERN**, a lantern constructed so as to have its light concealed by a slide at pleasure. **LANTERN-JAWS**, long lean jaws; a thin visage. **LANTERN-JAWED**, having a thin visage.

LAN'TERN-FLY (*Fulgora*): genus of homopterous insects; type of a family *Fulgoridæ*, allied to *Cicadidæ*, but having legs more adapted for leaping, and destitute of organs for producing sound. The forehead is remarkably prolonged into an empty vesicular expansion, which assumes in the different species various and very singular forms, sometimes equalling the body of the insect in size. The colors are generally rich. The species are natives of the warmest parts of the world. The name L. was originally given to *F. laternaria*, a large species, found in Guiana, and of which the inflated projection of the forehead was said to be sometimes most brilliantly luminous; but the evidence is lacking, and

LANTHANUM—LANZI.

naturalists now refuse to believe in the luminosity of any of this genus. A possible explanation is, that the luminosity is sexual, and merely occasional, perhaps limited to particular seasons. Concerning the lumi-



Lantern-Fly (*Fulgora laternaria*).

nosity of the CHINESE L. (*F. candelaria*), also there is doubt. The prolongation of the forehead in this species is a comparatively narrow snout.

LANTHANUM, n. *lăn-thă'nĩ-ũm*, or LAN'THANUM, n. *-thă-nũm* [Gr. *lanthănō*, I lie hid]: elementary body, forming a very rare metal which, with *cerium* and *didymium*, occurs as a silicate in the Swedish mineral *cerite*, a hydrated silicate of cerium: see CERIUM. L. is of little chemical interest, and of no practical value.

LANTHORN, n. *lăn'thörn*: an obsolete spelling of *lantern*, which took its rise from the popular etymology connecting *ern* with *horn*, of which the sides of a lantern were often formed.

LANUGINOUS, a. *lă-nũ'jĩ-nũs*, or LANU'GINOSE, a. *-jĩ-nōs* [L. *lanũgo* or *lanũginem*, wool-like hair, down—from *lana*, wool]: downy or woolly; covered with down, or fine, soft, interlaced hairs. LANUGO, n. *lă-nũ'gō*, the first and temporary hair of an infant.

LANYARD, or LANIARD, n. *lăn'yěrd* [F. *lauière*, a strap, a thong—from L. *lanāriũs*, woolly, made of wool—from *lāna*, wool]: a short piece of line or rope used for fastening something in a ship, or to stretch other more important ropes to their utmost tension.

LANZAROTE, *lăn-să-rō'tă*, Sp. *lăn-thă-rō'tă*: one of the Canaries (q.v.).

LANZI, *lăn'zē*, LUIGI: 1732, June 14—1810, Mar. 30; b. Monte dell' Olmo, near Macerata: Italian antiquary. He entered the order of the Jesuits, and resided at Rome, and afterward at Florence, where he died. He published at Florence, 1782, *Descrizione della Galleria di Firenze*. His great works, distinguished for profound erudition, are *Saggio di Lingua Etrusca* (3 vols. Rome 1789), in which, contrary to the prevalent opinion among Italian savants, he maintains the influence of Greece upon Etruscan civilization; and *Storia Pittorica d'Italia*, etc. (Florence 1792, and Bassano 1789 and 1806; Eng. trans. by Thomas Roscoe in Bohn's Standard Library, 3 vols. 1847). His posthumous works were published, 2 vols. Florence, 1817.

LAOCOON—LAODICEA.

LAOCOON, n. *lā-ōk'ō-ōn*: in *classic legend*, a priest either of Apollo or Neptune, in Troy, who in vain warned his countrymen of the deceit practiced by the Greeks in their pretended offering of the wooden horse to Minerva, and who, for this warning and for marrying contrary to the will of Apollo, was destroyed with his two sons by two enormous serpents which came from the sea. They first fastened on his children, and when he attempted to rescue them, involved him in their coils. This legend is not Homeric, but of later origin. It was a favorite theme of the Greek poets, and is introduced in the *Æneid* of Virgil. It has a peculiar interest as the subject of one of the most famous works of ancient sculpture extant; a group discovered 1506 at Rome, in the Sette Sale, on the side of the Esquiline Hill, and purchased by Pope Julius II. for the Vatican. It was carried to Paris, but recovered 1814. The whole treatment of the subject, the anatomical accuracy of the



Laocöon.

figures, and the representation both of bodily pain, and of passion, have always commanded the highest admiration. According to Pliny, it was the work of the Rhodian artists, Agesander, Polydorus, and Athenodorus, but this is doubtful. Casts of it are in all principal museums of Europe and America. For an æsthetic exposition of its merits, see Lessing's celebrated *Laocöon oder über die Grenzen der Malerei und Poesie*.

LAODICEA, *lā-ōd-ī-sē'a*: city of ancient Phrygia, near the river Lycos; named from Laodice, queen of Antiochus Theos, its founder. It was built on the site of an older town, Diospolis. It was annexed to the Roman empire B.C. 133, and became a populous and splendid city. It was destroyed by an earthquake during the reign of Tiberius, but rebuilt by the inhabitants, who were very wealthy. It fell into the hands of the Turks

LAODICEAN—LAOS.

1255, was again destroyed 1402, and is now a heap of uninteresting ruins, known by the name of Eski-Hissar. Art and science flourished among the ancient Laodiceans, and it was the seat of a famous medical school. The number of Jews living here at the rise of Christianity accounts for its importance in the primitive history of the church. An ecclesiastical council, the first council of L., held here at some time between 343 and 381, adopted resolutions concerning the canon of the Old and New Testaments, and concerning ecclesiastical discipline. A second council of L., 476, condemned the Eutychians. It is supposed by some that the Christian church here was founded by the apostle Paul; this is possible; but the belief that Col. iv. 16, proves that an epistle was written to it from Paul, which has been lost, has been shown by Bp. Lightfoot to be without foundation: he identifies 'the epistle from Laodicea' with the canonical epistle to the Ephesians (q.v.).—The extant Latin epistle entitled Epistle to the Laodiceans, purporting to be from Paul, is a modern forgery noticeable for stupidity as a group of disjointed quotations from Paul's genuine epistles.

LAODICEAN, a. *lā'ōd-ī-sē'ān*: of or resembling the Christians of *Laodicea*; lukewarm in religion (Rev. iii. 15-17).

LAODICEANS, EPISTLE TO THE: see LAODICEA.

LAON, *lā-ōng'*: chief town of the dept. of Aisne, France, in a strong position on a steep isolated hill, 80 m. n.e. of Paris. The walls (flanked with towers) with which L. is surrounded, the noble Gothic cathedral (built 1112-14) on the summit of the hill, and the charming character of the scenery in the vicinity, greatly enhance the appearance of the town. The public library, with 20,000 vols., contains a beautiful statue in marble of Gabrielle d'Estrées. The manufactures are nails, hats, leather, and hosiery. Here, 1814, Mar. 9, 10, Napoleon I. was defeated by the allies. L. had to surrender to a German force 1870, Sep. 9. Pop. (1881) 12,445.

LAOPHIS, n. *lā'ō-fīs* [Gr. *lāās*, a rock; *ophis*, a serpent]: in *geol.*, a Tertiary serpent having some affinities to the rattlesnake.

LA'OS: see SHAN STATES.

LAO-TSZE.

LAO-TSZE, *lâ'o-tsêh*, or **LAOU-TSZE**, *lâ'ô-tsêh*: celebrated philosopher of China, founder of a religion as ancient and important as that of Confucius (q.v.); b. (according to Chinese authorities) B.C. 604. His sect is commonly known as the *Taou*, or sect of reason. His family name was *Le*, or Plum, and his youthful name *Urh*, or Ear—given him on account of the size of his ears. His name of honor was *Pe-yang*, his surname *Laou-tsze* ('old child'), or *Laou-keun-tsze* ('old prince'), by which he is generally known. Little authentic is known of the life of L., his followers having subsequently made a myth of his biography. His birth is assigned to the third year of Emperor Ting-wang, of the Chow dynasty, in the state of Tseu, at present known as Hoo-pih and Hoo-nan, 54 years before Confucius. His father, according to the legends of the Taou sect, was 70 years before he married, and his mother 40 years of age when she conceived L. He was the incarnation of a shooting-star, a kind of god on earth, and was 80 years in his mother's womb, so that when he was born his hair was white with age. More trustworthy is the statement that he was a historian and archivist of a king of the Chow dynasty, who loved books, studied rites and history, and went, somewhat after B.C. 600, to the w. parts of China, where he might have become acquainted with the worship of Fuh or Buddha. Confucius was so attracted by his renown, that he went to see him. but the meeting does not appear to have been entirely amicable, for L. reproached the sage with pride, vanity, and ostentation, stating that sages loved obscurity and retreat, studied time and circumstances before they spoke, and made no parade of knowledge and virtue. Confucius, however, highly lauded L. to his followers, and called him a dragon soaring to the clouds of heaven, which nothing could surpass. L. asked Confucius if he had discovered the *Taou* ('path' or 'reason') by which Heaven acts, when Confucius answered that he had searched for it without success. L. replied that the rich sent away their friends with presents, sages theirs with good advice, and that he humbly thought himself a sage. By this he probably meant that all he could offer Confucius was the advice of seeking the *Taou*. He retired to Han-Kwan, where the magistrates of the place received him, and there he wrote the *Taou-tih-king*, or Book of Reason and Virtue. He died, or, according to other accounts, mounted to heaven on a black buffalo, in the 21st year of the reign of King-wang of the Chow dynasty, B.C. 523, having attained the age of 119 years.

The doctrines of L. differ from those of Confucius, indeed, have a higher scope—the object of the last-named philosopher, or rather statesman, being the practical government of man through a code of morals; that of L., the rendering of man immortal through the contemplation of God, the repression of the passions, and

LAO-TSZE.

the perfect tranquillity of the soul. Hence his doctrine was, that Silence and the Void produced the Taou, the path or reason (or as some think it should be rendered, 'Logos') by which movement was produced; and from these two sprang all beings which contained in themselves the dual principle of male and female. Man was composed of two principles, one material, the other spiritual, from which he emanated, and to which he ought to return by throwing off the shackles of the body, annihilating the material passions, the inclinations of the soul, and pleasures of the body. By this means the soul was to regain its origin—become immortal. This could be effected only by the renunciation of riches, honors, and the ties of life. Up to the period of L., the national worship had been restricted to the *Shang-te*, or 'supreme ruler' of the world, and the *Teen*, or 'heaven.' For these, L. substituted the *Taou* ('path' or 'reason') of the cosmos, not citing, as the Confucianists, the precedents of ancient kings or sages—appealing to the abstract principle, and, in fact, preaching a religion which found an echo in the Chinese breast. The followers of his sect, however, considerably altered his doctrines. The moral code of the Taou sect is excellent, inculcating all the great principles found in other religions of the better class—charity, benevolence, virtue, and the free-will, moral agency, and responsibility of man. But it subsequently became corrupted with strange doctrines and practices. His followers promulgated that they had discovered the drink of immortality, and obtained a host of partisans in the reign of Wan-te of the Han dynasty, A.D. 140, and many of the emperors were addicted to their rites, and some poisoned by the drink of immortality. Alchemy also became another pursuit of the sect; so did divination, the invocation of spirits, and the prediction of the future. The doctors of the sect, called *Teen-sze* ('celestial doctors'), were supposed by these means to become ethereal, and to be caught up to heaven without passing through the intermediate state of death. Such statements, however, were ridiculed by the *Joo-keaou*, or sect of Confucius, the skeptics of China, who openly derided their pretensions. Innumerable gods also were introduced into the worship, which was assimilated to the Buddhist. As now known, Taouism is a conglomerate of base and noxious superstitions, scarcely recognizable as any possible product of the teachings of its reputed founder. Since the 2d c. after Christ, the sect has spread in China, Japan, Cochin-China, Tonquin, and among the Indo-Chinese nations. Monasteries and nunneries belonging to them were founded and flourished. Taouism is now thought by many to have been influenced by, or directly derived from, Indian Brahmanism, which it much resembles, being very un-Chinese in character; so that it is to be regarded as the development of a foreign faith, not a new and native one.—See Stanislas Julien, *Le Livre des*

LAP—LAPAROTOMY.

Recompenses (1838), translated by Chalmers; Legge, *Religions of China* (1880); Douglas, *Confucianism and Taoism* (1880); Balfour, *Taoist Texts* (1885): see also some works mentioned under CHINESE EMPIRE.

LAP, n. *lǎp* [Icel. *lapa*, to hang loose: Ger. *lapp*, slack; *lappen*, anything hanging loose: Dut. and Dan. *lap*, a remnant, a patch]: the flap or loose skirt of a garment; the knees and thighs, or the part of the clothes which cover them, in a sitting position, particularly those of a woman; a roll or sliver of cotton for feeding the cards of a spinning-machine: V. [OE. *lappyn*, to wrap: F. *enveloppe*, to wrap up]: to bring the lap or flap of a garment round one; to wrap or twist round; to lay one thing partly over another; to be spread or turned over something. LAP'PING, imp.: N. a kind of machine-blanket or wrapping-cloth used by calico-printers. LAPPED, pp. *lǎpt*. LAPFUL, n. *lǎp'fúl*, as much as the lap can contain. LAPEL, n. *lǎ-pèl'*, the part of a coat or waistcoat which is turned back, forming the facing. LAPELLED', a. *-pèld'*, having lapels. LAP'PER, n. *-ér*, one who laps. LAPPET, n. *lǎp'èt*, a little loose flap; part of a lady's head-dress. LAP'DOG, a small dog of several varieties, fondled by a woman—so named from being fondled on the lap, or from its loose hanging ears, most of these dogs are Spaniels (q.v.) as the King Charles's Spaniel, the Maltese Dog, etc.; and gentleness of disposition, large ears, and long hair, are among the approved characteristics of these dogs, of which the very smallest is the MEXICAN LAPDOG. LAPPING-ENGINE, a doubling machine; an engine for making folds or welds. LAP'STONE, the stone on which a shoemaker beats his leather, while it lies upon his knees or lap. *Note*.—LAPDOG, though popularly referred to the fact of its being so small as to be held on the *lap*, was originally named from its 'loose hanging ears'; so we speak of rabbits as *lop* or *lap* eared, that is, having hanging ears.

LAP, v. *lǎp* [AS. *lapan*, to lap: Icel. *lapja*, to lap like a dog: F. *lapper*, to lap or lick up: Gr. *laptō*, I lap, I drink greedily: L. *lambĕrĕ*, to lick]: to feed or drink with the tongue; to lick up; to cut or polish with a lap: N. a piece of brass, lead, or other soft metal, or a piece of wood or leather, in the form of a rapid revolving wheel or disk, used in polishing cutlery, or, along with polishing-powder, in polishing gems or cutting glass. LAP'PING, imp. LAPPED, pp. *lǎpt*. LAP'PER, n. *-ér*, one who. LAPPOR, n. *lǎp'ĭ-ör*, a miner who dresses the refuse ores that are left.

LAPAGERIA, n. *lǎp'ä-jĕ'rĭ-ä* [after the F. botanist *Lapagerie*]: a genus of beautiful twining undershrubs with flowers somewhat bell-shaped.

LAPAROTOMY, n. *lǎp-ä-röl'ō-mĭ* [Gr. *lǎpāra*, flank, loins; *tōmĕ*, cutting]: operation of cutting into the abdomen.

LA PAZ—LAPÉROUSE.

LA PAZ, *lâ pâz*, Sp. *lâ pâth*: department in Bolivia, comprising much of the valley of the Desaguadero, with the n. portion of the e. Cordilleras and numerous valleys on their e. declivity, and the plain w. of the Rio Beni; in all, 45,000 sq. m. The plain and valleys are fertile, but little cultivated. The rivers bring from the mountains much gold sand. Cap. LA PAZ DE AYACUCHO.—Pop. of dept. 447,882.

LA PAZ DE AYACUCHO, *lâ pâth da i-â-kô'chô* (official name of LA PAZ): city, cap. of Bolivia and of the dept. of L. P.; 16° 30' n. lat., 68° w. long.; on the Chuquiapo river, at the base of the Cordillera Real, about 40 m. e. of Lake Titicaca; 11,970 ft. above sea-level. The town is commercially important, as the centre of the Bolivian trade in cuca and cinchona. The Arequipa railway connects it with Islay, and there is coach and steamer communication with the Pacific. There are several large churches; but the cathedral, founded by Pope Paul V., 1605, is one of the finest in S. America. The city was founded 1548, by Alónzo de Mendoza; and received its full official name 1825, in commemoration of the battle of Bolivian independence. Pop., largely Aymaras, estimated 70,000 to 80,000.

LAPÉL: see under LAP 1.

LAPÉROUSE, *lâ-pâ-rôz'*, JEAN-FRANÇOIS GALAUP, Count DE: 1741, Aug. 22—abt. 1788; b. near Albi, Languedoc, now in the dept. of Tarn: French voyager. He attained the rank of capt. in the French navy; and was sent 1782 to destroy the British forts or settlements in Hudson's Bay. In this expedition he showed remarkable power of contending with difficulties, and accomplished his object, notwithstanding the storminess of the sea and the ice in which it abounded. He signaled himself also by humility towards the occupants of the forts which he destroyed. He was then chosen by the French govt. to command an expedition of discovery, and sailed, 1785, Aug., with two ships, visited the n.w. coast of America, explored the n.e. coasts of Asia, and made important discoveries in that region, though he failed to discover the N.W. Passage. In 1788, Feb., he anchored in Botany Bay, after which all trace of him was lost. The French govt. offered a reward of 10,000 francs for information, and 1791 sent an expedition in search of him, but without success. In 1826 an English capt., Dillon, found on the island of Tucopia a number of things belonging to L.'s ships, obtained from the inhabitants of Mallicollo, one of the New Hebrides. The E. India Company sent Capt. Dillon, and the French govt. sent out an expedition under Dumont d'Urville to investigate all traces of L. and his fellow-voyagers. Eye-witnesses of the destruction of two French vessels were found; it was fully ascertained that both of L.'s ships had been wrecked in a storm on a coral reef off the coast of Mallicollo, and that all on board had per-

LAPIDARY—LAPIDARY-WORK.

ished. The account of L.'s voyage, prepared from journals sent home by him, was published under the title *Voyage autour du Monde* (4 vols., Paris 1797, with atlas).

LAPIDARY, n. *lăp'i-dēr-ī* [L. *lapidāriūs*, of or belonging to stone—from *lapis* or *lapīdem*, a stone: It. *lapidario*; F. *lapidaire*]: one who cuts, polishes, or engraves precious stones; a dealer in precious stones: **ADJ.** pertaining to the art of the lapidary. **LAPID'EUS**, a. -ē-ūs, stony. **LAP'IDES'CENT**, a. -dēs'ēnt, growing or turning to stone. **LAPID'IFY**, v. -ī-fī [L. *faciō*, I make]: to form or convert into stone. **LAPID'IFYING**, imp. **LAPID'IFIED**, pp. -ī-fīd. **LAPID'IFICA'TION**, n. -kā'shūn, the process by which soft, loose, or incohering substances, organic or inorganic, are converted into stony matter. **LAPIDARY INSCRIPTIONS**, monumental records, epitaphs, etc., engraved, chiselled, or stamped, on stone, or metal, or clay: see **CUNEIFORM**: **HIEROGLYPHICS**: **RUNES**: **ROSETTA** (stone).

LAPIDARY-WORK: art of cutting, grinding, and polishing small pieces of ornamental or precious stones for jewelry. (For the engraving of figures on precious stones, see **CAMEO**: **GEM**.) The working of the less precious ornamental stones has made great advance within the last 30 years, and nowhere has it reached greater perfection than in Scotland. A large trade is now carried on in this kind of work between Birmingham and some towns of Germany, where the Scotch patterns are imitated; and though the continental productions are of inferior workmanship, their comparative cheapness commands a ready market.

Stones are cut by rubbing the powder of a harder stone against a softer one. There are ten types of **Hardness** (q.v.), from talc up to diamond; but in practice

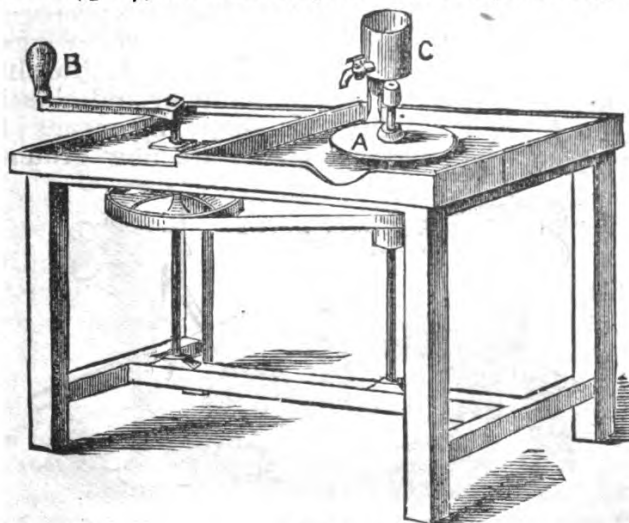


Fig. 1.

it is found most convenient to use either diamond-

LAPIDARY-WORK.

powder or emery, which is next to it, for the cutting of all kinds of stones. Diamond-dust is found to cut ten times faster than emery; so that, except where the machine is driven by water-power, it is found more profitable to employ diamond-powder notwithstanding its high price. Diamond-powder is prepared from the inferior kind of Diamonds (q.v.) called bort (costing about a guinea per carat), by grinding in a steel mortar.

To produce a plain polished surface on any stone, say a jasper, it goes through the three processes of cutting or slitting, grinding, and polishing. The diamond-slitting machine (the emery-machine is essentially the same) is shown in fig. 1. The slitting-wheel, A, driven by means of the handle, B, is a mere disk of thin sheet-iron, from 6 to 9 inches in diameter, with a turned edge, and is generally placed in a horizontal position. The diamond-dust, mixed with a little sperm-oil, is applied to the edge of the slitting-wheel with the finger, and is then pressed into the soft iron with a smooth hard stone. The wheel will then continue to cut for several hours without any renewal of the powder. When the wheel is thus prepared, a stone held by the hand to the cutting edge is rapidly slit through. During the operation, sperm-oil is kept dropping from the can, C, to keep the wheel from heating.

The grinding is performed on a horizontal lead-wheel, charged on its upper surface with emery-powder; the stone to be ground being pressed against it with the hand until it is smooth enough for polishing. In polishing, a tin wheel is substituted for the leaden one, the polishing material being rotten-stone.

If, instead of a plane flat surface, some ornamental surface is required, say an agate brooch in the shape of a butterfly, a model is produced in plaster of Paris, to serve as a guide, and metal size-plates are prepared for the pieces of stone which are to form the wings, etc. For these, thin slices of agate are cut at the slitting-machine, or chipped off with a hammer and chisel, and are then formed roughly into shape, by means of soft iron nippers. The several pieces are now ground and

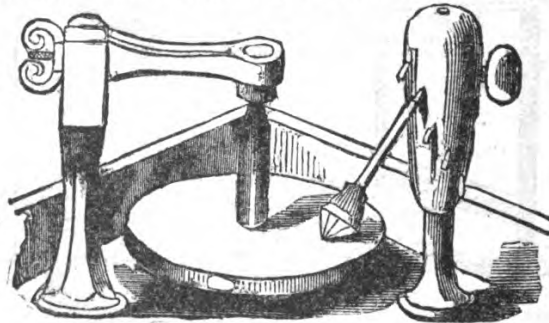


Fig. 2.

polished, as already described, and the brooch is finished.

LAPILLUS—LAPITHÆ.

When pieces of stone are too small to be held in the hand, they are attached with cement to a wooden handle, and then applied to the wheels.

One of the most elaborate operations of the lapidary is the cutting of Cairngorm (q.v.) stones. The mode of faceting the surface, which so much enhances their beauty, is shown in fig. 2, which is the ordinary grinding-wheel, with the addition of a wooden peg, stuck round with projecting wires. The stone is fixed with cement on the end of a stick, having a hole at the other end fitting on the wire-points, which, being at different heights, enables the stone to be held at any angle to the grinding surface. With this simple guide, the lapidary proceeds to cut the facets, dividing them off by the eye, aided by his sense of feeling; and in this way, in about a fortnight's time, as many as 700 facets are produced of perfect regularity upon a stone, say an inch in diameter. A Cairngorm of good color, so cut, may be worth about \$150.

LAPILLUS, n. *lă-pil'lŭs*, LAPIL'LI, n. plu. *-lī* [L. *lapillus*, a little stone—from *lapis*, a stone]: small stones, such as are thrown from burning mountains during an eruption, and cooled into rounded drops in falling.

LAPIS, n. *lăp'is* [L. *lapis*, a stone]: a general term for any kind of stone. LAPIS-LAZULI, n. *-lăz'ŭ-lī* [see LAZULI]: a well-known mineral of an ultramarine or fine azure-blue color of various intensity; consisting chiefly of silica and alumina, with a little sulphuric acid, soda, and lime. L. is often marked by white spots and bands. It is generally found massive, and is translucent at the edges, with uneven, finely granular fracture, but sometimes appears crystallized in rhombic dodecahedrons, its primitive form. It is found in primitive limestone and in granite; in Siberia, China, Tibet, Chili, etc. The finest specimens are from Bokhara. The Greeks and Romans called it *Sapphire*. It was more highly esteemed by them as an ornamental stone than it now is. They used it much for engraving, for vases, etc. It is extensively employed in ornamental and mosaic work, and for sumptuous altars and shrines. It is easily wrought, and takes a good polish. The valuable pigment Ultramarine (q.v.) is made from it. It is one of the minerals sometimes called *Azure Stone*.

LAPITHÆ, *lăp'ŭ-thē*: mythical wild race, inhabiting in ancient times the mountains of Thessaly. They derived their name from a mythical ancestor, *Lapithes*, son of Apollo, and brother of Centauros, the equally mythical ancestor of the Centaurs (q.v.). A bloody war is said to have been waged between the kindred races in pre-historic times, which ended in the defeat of the Centaurs, but the L. were in their turn subdued by Hercules. The contest of Centaurs and L. was one of the great events in Greek mythology, and a favorite theme of Greek art.

LAPLACE.

LAPLACE, *lâ-plâs'*, PIERRE SIMON, Marquis DE: one of the greatest of mathematicians and astronomers: 1749, Mar. 28—1829, Mar. 5; b. Beaumont-en-Auge, dept. of Calvados, France. He for some time was teacher of mathematics in the military school there, and afterward went to Paris, where, having attracted the notice of D'Alembert, he was appointed prof. in the military school, and admitted a member of the Acad. of Sciences. He had by this time mastered the whole range of mathematical science, as then known, and had besides solved several problems, which had defied the attempts of geometers; and it occurred to him to devote his mathematical powers to the service of astronomy, and he accordingly commenced to plan the work which afterward appeared as the *Mécanique Céleste*. In his political life, L. presents a sorry picture. He was appointed minister of the interior by Bonaparte, but was, after six weeks, deposed for incapacity. He continued, however, to receive marks of honor from Napoleon, and on the erection of the imperial throne, was made a count. In 1814, he voted for the appointment of the provisional government, for Napoleon's deposition, and the restoration of the Bourbons. After the second restoration, Louis XVIII. made him a peer and a marquis. In the chamber of peers, he showed, as under the revolutionary government, the greatest unfitness for political affairs, and an extreme servility. He died at Paris. L. was gifted with wonderful scientific sagacity: this appears especially in his explanations of certain results of mathematical analysis formerly deemed inexplicable, but which he showed to be the expression of physical phenomena which had hitherto escaped detection; and subsequent observations generally confirmed L.'s conclusions. In mathematical astronomy he was second to Newton only. Above all his powers, his wonderful memory was pre-eminent. His *Mécanique Céleste*, and supplements to it (5 vols. Paris 1799-1825—trans. by Nathaniel Bowditch, Boston 1829), are, next to Newton's *Principia*, the greatest of astronomical works. Mrs. Somerville's *Mechanism of the Heavens* is in part a synopsis of the first-named work. His *Exposition du Système du Monde* (2 vols. Paris 1796; 6th ed. 1824) is intended for those who cannot follow the difficult demonstrations and calculations in his great work. All L.'s important investigations were for the purpose of testing the generality of the law of gravitation, and the cause of sundry irregularities in the motions of the planets. His works comprise many able treatises on particular subjects in Astronomy, Pure Mathematics, Probabilities, Mechanics, Heat, and Electricity; most of them being Memoirs communicated to the Acad. of Sciences.

LAPLAND.

LAPLAND, *lapp'land*: n.w. portion of the European continent. The territory still known under this name does not constitute a separate political autonomy, but is included under the dominions of Sweden and Norway, and of Russia. L., or the Land of the Lapps, called by the natives Sameanda, or Somellada, occupies the n. and n.e. portions of the Scandinavian peninsula, and the extreme n.w. districts of the Russian dominion, within the grand-duchy of Finland. Norwegian L. is included under the provinces of Norrland and Finmark; Swedish L., under N. and S. Bothnia, and divided into Torneä, Luleä, Piteä, Umeä, Aselä Lappmark; Russian L., under Finland, in the circles of Kemi and Kola. Norwegian L. comprises nearly 26,500 sq. m., native pop. 5,000; Swedish L., 50,600 sq. m., pop. 4,000; and Russian L., 11,300 sq. m., pop. 8,800. These numbers refer merely to the true Lapps, in addition to whom are Finns, Swedes, Norwegians, and Russians, settled in various parts of the Lappish territory, whose respective numbers probably bring the pop. of Norwegian L., to about 50,000; Swedish L., about 14,000; and Russian L., about 60,000; though the boundaries of these divisions are so loosely defined, and their areas and populations so variously given by different writers, that it is difficult to arrive at an accurate estimate of either. The climate of the Lappish territory is extremely cold for nine months of the year; while the excessive heat of July and August, when in the northernmost parts the sun never sets for several weeks, is separated from the cold seasons by only a short spring and autumn of about two weeks. The general limit of the cereals is 66° n. lat.; but barley can be grown as far n. in L. as 70°. The country is covered over a considerable part of its surface with forests, chiefly of birch, pine, fir, and alder, and having an undergrowth of lichens and mosses, which supply abundant food for the herds of reindeer which constitute the principal sources of wealth to the inhabitants. Many elevated tracts are, however, entirely destitute of vegetation, and consequently uninhabitable.

The LAPPS or LAPLANDERS, classed ethnologically in the same family as the Finns, Esthonians, and Livonians, and occupying the most northern parts of the Scandinavian peninsula, are distinguished, in accordance with the nature of their pursuits, as the *Soelappen* and the *Boelappen*, or the Seafaring and Land-tilling Lapps. They were originally all nomadic; but the difficulty of finding sufficient food within the limited space to which the increasing civilization of the neighboring people had gradually restricted them, has compelled some of the tribes to settle near the larger rivers and lakes, where they follow fishing and hunting with considerable success. They show great skill as marksmen, and regularly supply the large annual markets of Vitangi and Kengis with game and skins, which are sent by Torneä to Stockholm, where they find a ready mart. The Lapps,

LA PLATA.

who call themselves the *Sami* or *Sahmelads*, are a physically ill-developed, diminutive race, with small eyes, low forehead, high cheek-bones, pointed chin, and scanty beard. They are, however, neither wanting in mental capacity nor manual dexterity; and in the seminary for Lapp teachers at Trondenaes, in the dist. of Senjen, several of the students have distinguished themselves by extensive acquirements. In the mythical sagas of Scandinavia, the Lapps are represented as an inferior race, distinguished only for craft and treachery, and addicted to practices of sorcery. They are regarded, in accordance with the same authorities, as the original occupiers of the whole of Scandinavia, from the fertile and more southern portions of which they were in ancient times driven forth by the superior, divinely-descended race of Odin, who banished them to the inhospitable regions in which they are now circumscribed. Their tendency to deceit is probably in a great measure to be attributed to the inferior position in which they are kept by the Norwegians, Swedes, and Russians, near whom they live, for they are honest, and strongly attached to their own people and country; and though they are still superstitious and credulous, they are not devoid of religious sentiment. They conform to the Christian faith of their neighbors—the Norwegian Lapps belonging to the Lutheran, and the Russian Lapps to the Greek Church. The Bible has been translated into their own language, which is divided, like that of all nomadic tribes, into numerous dialects, whose many affinities and differences have of late years attracted much attention from Northern and German philologists. The number of the Lapps probably falls below 20,000 (see above), of whom about half are included in the pop. of Sweden and Norway, and half within the Russian dominions. The reindeer supplies the people with most of the articles of food and clothing which they use. Their dwellings consist either of conically shaped mud-huts, raised on stakes, and almost impervious to light and air, or of hide-covered tents. Towns or villages are unknown. The contempt with which they are regarded by the tall, well-developed Norwegian peasants, hinders all amalgamation between the races, while their peculiar habits, and the tenacity with which they cling to their own customs, tends still more to isolate them from the neighboring nations.

LA PLA'TA: see ARGENTINE REPUBLIC.

LA PLATA, RIO DE: see PLATA, RIO DE LA.

LA PORTE—LAPSE.

LA PORTE, *la pōrt'*: city, cap. of La Porte co., Ind.; at junction of the Lake Shore and Michigan Southern and the Indianapolis Peru and Chicago railroads; 12 m. s. of Lake Michigan, 59 m. e. of Chicago, 135 m. n. by w. of Indianapolis. It occupies high ground on the border of a rich prairie; is noted for beautiful residences, handsome drives and promenades, and a chain of 7 picturesque lakes, which from their facilities for boating and bathing are a popular summer resort; and contains 17 churches, an acad., several fine public schools, public library, national bank (cap. \$100,000), 2 private banks, foundries and machine shops, saw, planing, and flour mills, and agricultural implement factory. Pop. (1870) 6,581; (1880) 6,195; (1884) 9,139.

LAPPENBERG, *lāp'én-bērēh*, **JOHANN MARTIN**: 1794, July 30—1865, Nov. 28; b. Hamburg: German historian. He studied medicine at Edinburgh, but turned to historical and political studies. He resided some time in London, afterward studied law and history in Berlin and Göttingen, and became representative of his native city at the Prussian court 1820. In 1823 he was appointed archivist to the Hamburg senate, and discovered many valuable historic records. In 1850, he represented his native city at the diet of Frankfurt. One of his principal works is *Geschichte von England* (2 vols. Hamb. 1834-37; continuation 3 vols. Hamb. 1853, and Gotha 1855-58, bringing the history to the end of Henry VII.'s reign); the first vol. translated into English by B. Thorpe, with title *A History of England under the Anglo-Saxon Kings* (2 vols. Lond. 1845), and the second, with title *A History of England under the Norman Kings*. (1 vol. 1857). He was author of the following works also, remarkable for research, *Urkundliche Geschichte des Ursprungs der deutschen Hansa* (2 vols. Hamburg 1830); *Die Geschichte Helgolands* (Hamburg 1831); also an ed. of Ditmar of Merseburg, and many valuable works relating specially to Hamburg and Bremen.

LAPPER, v. *lāp'ēr* [Icel. *hlaup*, curdled milk]: in *Scot.*, to cover so as to clot; to curdle. **LAP'PERING**, imp. **LAP'PERED**, pp. *-ērd*: **ADJ.** coagulated, as 'lappered milk.'

LAPPER, **LAPPET**, and **LAPPING**: see under **LAP** 1.

LAPPIOR: see under **LAP** 2.

LAPPS, n. plu. *lāps*: the inhabitants of Lapland (q.v.).

LAPSE, n. *lāps* [L. *lapsus*, slidden or fallen; *lapsārē*, to slip: F. *laps*; Sp. *lapso*, lapse or course of time]: a gliding; a slight error or mistake; a slip; a falling or passing; omission to present to a benefice in due time, which gives the right to another: V. to pass slowly, silently, or by degrees; to commit a fault by inadvertency or mistake; to slide or fall anew into sin; to fall or pass from one to another by omission or negligence, as property. **LAPS'ING**, imp. **LAPSED**, pp. *lāpst*. **LAPS'ABLE**, a. *-ā-bl*, capable of falling or relapsing.

LAPSE—LAPWING.

LAPSE, *läps*, OF A LEGACY: failure to come into effect under law, because of the death of the legatee before the testator; for as a will operates only from the death of the testator, if at that time the legatee be dead, the legacy lapses; i.e., falls into and becomes part of the residuary estate. So as to a devise. Also there may in some cases be a L. while the legatee is alive: see LEGACY.

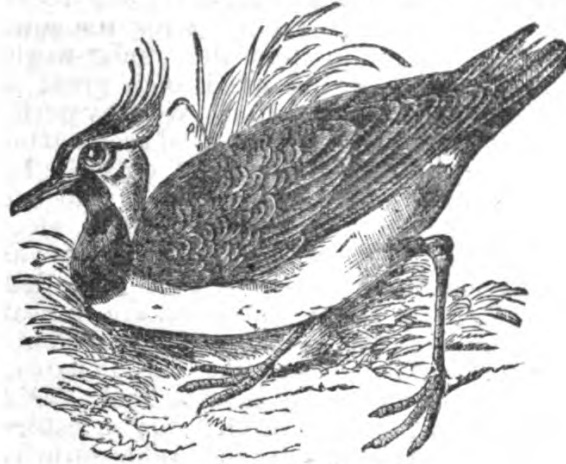
LAPSED, *läpst* (*Lapsi*): designation in the early centuries of the Christian Church, of those who, overcome by heathen persecution, did not continue faithful in their confession of Christ. Their number was considerable, when, after a long time of peace, the first general persecution under Decius began; but those who saved themselves by flight were reckoned among the L., though their case was not regarded as equally bad with that of those L. who sacrificed to idols. The L. were at first punished by excommunication, and their reception into the church again was strenuously resisted; but in the 3d c. a milder course was generally adopted. Their treatment was one of the practical questions most earnestly discussed in the early church.

LAPSUS LINGUÆ, *läp'süs ling'gwē* [L. *lapsus*, slip; *linguæ*, of the tongue]: a slip of the tongue; an inadvertent mistake in the utterance of the proper word or words. **LAP'SUS PEN'NÆ**, n. *pën'nē*, slip of the pen; a mistake in writing.

LAPWING, n. *läp'wīng* [*lap* or *flap*, and *wing*]: a bird that flaps its wings in a peculiar manner as it flies; the plover—called also the *peewit*. *Note*.—The origin of this word is referred to AS. *hledpan*, to run, to spring; O.H.G. *winchan*, to move from side to side: OE. *lap-winkē*, the sense thus being, 'the creature which turns about in running or flight,' which is fairly descriptive of the habit of the male bird—see SKEAT.—Lapwing (*Vanellus*), is a genus of birds of family *Charadriadæ* (Plovers, etc.), differing from the plovers chiefly in having a hind-toe, which however is small: also, the nasal grooves are prolonged over two-thirds of the beak.—One species, the COMMON L., CRESTED L., or PEEWIT (*V. cristatus*), is a well-known British bird, and a native of almost all parts of Europe, and of parts of Asia and Africa—e.g. Bengal, China, Japan. It is found in Iceland and even in Greenland, but it is not a native of N. America. It is not quite as large as a pigeon, and has the head surmounted with a beautiful crest. The head and crest are black; the throat is black in summer, white in winter; the back green, glossed with purple and copper color. The name Peewit (Scottish *Peesweep*) is derived with the French *Dixhuit*, the Swedish *Wipa*, the Danish *Kivit* and *Vibe*, the old English *Wype*, the Greek *Αἴξ*, etc., from the plaintive note; the local Scottish *Teuch-head* (Tufthead), from the crested head. The L. is very plentiful in moors, open commons, and marshy

LAR.

tracts, in pairs during the breeding-season; and in winter in flocks, chiefly on the sea-shore. Its artifices to prevent the discovery of its nest are very interesting: the cock attracts attention by his frantic gestures while the hen rises silently from the nest, which is little more



Lapwing (*V. cristatus*).

than a depression in the ground. The complement of eggs is usually four; but if some are taken away, the bird goes on laying, an instinct of which the egg-gatherers take advantage. The eggs are esteemed a great delicacy, and great numbers are sent to the London market, under the name of *Plovers' Eggs*, from the marshy districts of England. The bird itself is highly esteemed for the table.—A pet L. in a garden is of great service in preventing increase of worms and slugs.—Some species of L. have wattles at the base of the bill.—The TERU-TERO of S. America (*V. Cayanensis*), a species with spurs on the wings, abounds on the Pampas, is noisy on the approach of travellers, like the common L., and its eggs likewise are in esteem as a delicacy.

LAR, *lâr*: important town of Persia, cap. of the province of Laristan, on a well-wooded plain, at the foot of a ridge of hills, 60 m. from the Persian Gulf, 180 m. s.s.e. of Shiraz. The bazaar of L. is said to be the finest and most elaborate in Persia. Swords, muskets, and cotton cloth are made. Pop. 12,000.

LAR, n. *lâr*, LARES, n. plu. *lârêz* [*L. lârêz*]: domestic or household gods. LARES AND PENATES, *pên-â'têz* (sometimes LARES, MANES, AND PENATES), tutelary spirits, genii, or deities of the ancient Romans; household gods. The derivation of the names is not quite certain, but Lares is generally considered the plural of *lar*, Etruscan word signifying 'lord' or 'hero;' Manes is supposed to mean 'the good or benevolent ones;' and Penates is connected with *penus*, 'innermost part of a house or sanctuary.' The Lares, Manes, and Penates do not appear to have been regarded as essentially different

L'ARAISH—LARAMIE.

beings, for the names are frequently used either interchangeably or in such conjunction as almost implies identity. Yet some have thought that a distinction is discernible, and have looked upon the Lares as earthly, the Manes as infernal, and the Penates as heavenly protectors—a notion which has probably originated in the fact, that Manes is a general name for the souls of the departed, those who inhabit the under-world; while among the Penates are included such great deities as Jupiter, Juno, Vesta, etc. Hence we may perhaps infer that the Manes were the Lares viewed as departed spirits, and that the Penates embraced not only the Lares, but all spirits, whether daimons or deities, who exercised a 'special providence' over families, cities, etc. Of the Manes we know almost nothing distinctively; an annual festival was held in their honor, Feb. 19, called *Feralia* or *Parentalia*. Of the Penates we are in nearly equal ignorance; but of the Lares we have a somewhat detailed account. They were, like the Penates, divided into two classes—*Lares domestici*, and *Lares publici*. The former were the souls of virtuous ancestors set free from the realm of shades by the Acherontic rites, and exalted to the rank of protectors of their descendants. They were, in short, household-gods, and their worship was really a worship of ancestors. The first of the Lares in point of honor was the *Lar familiaris*, the founder of the house, the family Lar, who accompanied it in all its changes of residence. The *Lares publici* had a wider sphere of influence, and received particular names from the places over which they ruled. Thus, we read of *Lares compitales* (the Lares of cross-roads), *Lares vicorum* (the Lares of streets), the *Lares rurales* (the rural Lares), *Lares viales* (the Lares of the highways), *Lares permarini*, (The Lares of the sea), and the *Lares cubiculi* (the Lares of the bedchamber). The images of these guardian spirits or deities were placed (at least in large houses) in a small shrine or compartment called *ædiculæ* or *lararia*. They were worshipped every day: whenever a Roman family sat down to meals, a portion of the food was presented to them; but particular honors were paid to them on the Calends, Nones, and Ides of the month; and at festive gatherings, the *lararia* were thrown open, and the images of the household gods were adorned with garlands.

L'ARAISH', or LARACHE': see EL ARAISH.

LARAMIE PLAINS: fertile elevated plateau in Albany and Carbon cos., Wyo. Terr.; bounded n. and n.e. by the Laramie Mountains, n.w. by Rattlesnake Hills, s.w. by Medicine Bow Mountains; extreme length 60 m.; about 3,000 sq. m. It is s. of the n. fork of the Platte river; is watered by the Big and Little Laramie and Medicine Bow rivers; has short summers and severe winters, dry climate and alluvial soil, and while best adapted to grazing, yields good crops of cereals and

LARAMIE CITY—LARCENY.

larger ones of potatoes and general vegetables. Near its centre is Fort Laramie, oldest white settlement in the territory, where a fur-trading post was established 1834. The s. portion is traversed by the Union Pacific railroad. Large beds of iron and coal have been surveyed on the tract, and gold has been found on the slopes of Medicine Bow Mountains and around Laramie Peak.

LARAMIE CITY, *lār'a-mē*: city, cap. of Albany co., Wyo. Terr.; on the Union Pacific railroad; 57 m. n.w. of Cheyenne; 7,122 ft. above sea level. It is in the midst of the Laramie Plains, between the Rocky Mountains and the Black Hills; contains a co. court-house and jail, 5 churches, Rom. Cath. hospital, public library, several schools, 3 national banks (cap. \$300,000), rolling-mill, and round-house and machine and car-shops of the Union Pacific railroad. A stream of clear, cold water runs through it, fed by a spring at the foot of the Black Hills. L. C. was laid out 1868, Apr., when the railroad reached that point. The elective franchise was extended to women after the organization of Wyo. Terr., and L. C. was the first place in America where a jury was empanelled exclusively of women. Pop. (1880) 2,696.

LARAMIE MOUNTAINS: eastern and lower divide of the Rocky Mountains, crossing lat. 43°, and bounding Laramie Plains on n.e. and e.; height 7,000 to 8,000 ft. They are connected n.w. with the Big Horn Mountains, and n.e. with the Black Hills 'by low anti-clinals extending across the prairie.' The L. Mts. are composed of red syenite with fossiliferous strata, and outcrops of carboniferous triassic, jurassic, cretaceous, and some of lignite tertiary. Coal is found in several places in these mts. The Platte river and its branches flowing eastward pierce them.

LARBOARD, n. *lār'bōrd* [Dut. *laager*; OE. *leer*, left, and Eng. *board*]: obsolete naval term for the left side of a vessel, *looking forward*. From its liability to be confused by the steersman with the not very different sound, 'starboard,' the word was a few years ago officially abolished, and the expression 'port' arbitrarily substituted. The terms *starboard* and *larboard* are by some said to have been originally Italian—*questo bordo*, this side (the right); and *quello bordo*, that side (the left); which were contracted into *'sto bordo* and *'lo bordo*, and finally became *starboard* and *larboard*. The word *port* is said to be an abbreviation of *porta la timone*, 'carry the helm,' suggesting the analogy of porting the arms on the left hand: ADJ. pertaining to the left side of a vessel: see PORT 2.

LARCENY, n. *lār'sē-nī* [F. *larcin*, robbery—from OF. *larrecin*—from L. *latrōcin'ium*, robbery—from *latro*, a robber]: taking or carrying away the goods of another without his knowledge or consent; petty theft. LAR'CENIST, n. *-sē-nīst*, one who commits larceny; a thief. LARCENOUS, a. *lār'sēn-ūs*, having the character of larceny.

LARCENY.

LARCENY: wrongful taking and carrying away by one person of the personal property of another, without any color of right or excuse for the act, and with the intent of permanently depriving the owner of his property. It is of two kinds, simple and compound. *Simple L.* was formerly *grand* or *petit*, according as the value of the property taken was great or small; but the distinction has been abolished in England and in many of the United States; and in the states still retaining it *grand L.* is usually a felony by statute, and *petit L.* a misdemeanor, with different degrees of punishment. *Compound L.* is a form of *L.* aggravated by circumstances surrounding its commission; as when the property is taken directly from the house, after a trespass, or from the person, unknowingly or after an assault of the owner. The law holds fundamentally that an act of trespass must precede every *L.*; and in its relation to personal property a trespass is held to define an injury to or violation of a person's title and possessory interest in chattels; which injury or violation is comprised in the wrongful deprivation of possession without consent. Where consent is obtained, though by fraud, there is no *L.* A person retaining money paid by mistake, or any species of personal property which he has found and of which he knows the owner, is guilty of *L.*, for the owner has parted with neither by consent; but a person who is intrusted with the possession of an article by its owner and carries it away and sells or appropriates it is not guilty of *L.*, for the owner has consented to the possession and assumed the risk of honesty. While the law holds that the wrongful taking of property must be an actual removal, it is very strict on the method of removal and the length of time of wrongful possession. The removal may be exceedingly slight and the possession but a moment of time, as long as the owner's consent is not given and the intent is felonious: as the removal of a package of goods from one part of a wagon or sidewalk to another by one who intends to steal it if unobserved. A thief snatched a ring from a lady's ear; it immediately slipped from his hand and was found in her hair; he was convicted of *L.* because he had been in complete possession of the ring, though for a moment, without her consent. A distinction is made between possession and custody. When the possession of an article is intrusted to a person, who carries it away and appropriates it, there is no *L.*; but when the custody is merely parted with, such misappropriation constitutes a *L.*, for the owner has not actually parted with his right in the article. A servant is held to have custody, not possession, of his master's property, the possession remaining with the master; and if property is stolen while in custody of the servant, the crime is against the master, as the real possessor. It has been decided in the United States that a person who receives money from another for the purpose of getting it

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changed and who keeps it is guilty of L.; but in England the decisions on the same question are the reverse. A thief, stealing in one co. or state, and arrested with the goods in another, may be tried where arrested, the law assuming a fresh taking in every co. or state in which the thief carries the stolen property. Decisions vary on this question also; as in the case of a thief bringing stolen property from a British prov. to Mass., where the act was held to be no L. Personal property only is liable to L.; realty and fixtures naturally and truly attached to it are not liable; hence it is not L. to steal fruit from a person's orchard. Unconfined wild animals cannot be subject to L., and tame confined ones are subject only when they are fit for food. The flesh of dead animals if fit for food, and oysters planted for cultivation, are subject to L. There is a wide range of decisions in England and the United States concerning the liability of leasehold fixtures to L. In some states a tenant cannot remove a tree or vine that he has planted, nor any improvement that he has attached to leased premises by means of nails, when he vacates. A tenant who built a new stoop and attached it to the premises by means of screws was acquitted of L. on removing it because the attachment was not by nails; and another was justified in removing a valuable grape vine on proving that he had planted it in a large tub or box, though the box had been buried in the ground and almost wholly decayed. See CHOSE, IN LAW; FERÆ NATURÆ: FIXTURES.

LARCH, n. *lârch* [OF. *larege*—from L. and Gr. *larix*; It. *larice*, a larch], (*Larix*): genus of trees of nat. ord. *Coniferæ*, differing from firs (*Abies*)—of which, however, some botanists regard it as a mere sub-genus—in having the scales of the cones attenuated at the tip, and not falling off from the axis of the cone when fully ripe, and the leaves deciduous and in clusters, except on shoots of the same year, on which they are single and scattered.—The COMMON L. (*L. Europæa* or *Abies Larix*) is a beautiful tree, growing wild on the mountains of s. and middle Europe, found also in Asia, where it extends much further n., even to the limits of perpetual snow. The L. is not a native of Britain, and was not planted in any part of the island as a forest tree till the middle of the 18th c., when it began to be extensively planted. Its introduction has changed the aspect of whole districts, particularly in Scotland. The perfectly erect and regularly tapering stem of the L., its small branches, its regular conical form, and its very numerous and very small leaves, make its aspect peculiar among the trees of Britian. It attains a height of 60—100 ft., and an age of 200 years. The male catkins are small and bright yellow, the female catkins generally purple and erect; the cones ovate-oblong, about an inch long, and erect. The L. grows rapidly, and is useful even from an early age; the thinnings of a plantation being employed for

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hop-poles, palings, etc.; the older timber for a great variety of purposes. It is very resinous, does not readily rot even in water, is not readily attacked by worms, and is much used in ship-building. It is, however, very apt to warp, therefore not well suited for planks.—Larch-bark is used for tanning, though not nearly equal in value to oak-bark.—In Siberia, where large tracts of L. forest are frequently consumed by accidental fires, the scorched stems yield, instead of a resin, a gum similar to gum-arabic, reddish, and completely soluble in water, known as *Orenburgh Gum*, used for cementing and in medicine, and, notwithstanding a somewhat resinous smell, even for food.—In warm countries, a kind of Manna (q.v.) exudes from the leaves of the L., in the hottest



Larch (*L. Europæa*).

season of the year, having a sweetish taste, with a slight flavor of turpentine. It is gathered principally in France, and is known as *Briançon Manna*, or *L. Manna*.—The L. woods of Britain have of late years suffered greatly from a disease, in which the centre of the stem decays; the nature and causes are very imperfectly understood, though it seems ascertained that those plantations are peculiarly liable to it which are formed where any kind of fir has previously grown, and those least so which are regularly thinned, so that the trees have abundance of fresh air. The L. does not dislike moisture, but stagnation of water is very injurious to it, and thorough drainage is therefore necessary.—Varieties of the Common L. remarkable for crowded branches, for pendulous branches, and for other peculiarities, are sometimes planted as ornamental trees.—HACKMATACK (*L. Americana*), most useful and by far the most widely distributed representative of the L. family native to America; known also as Tamarack. It resembles the European L., but is smaller and much more hardy. It abounds in the northern United States, and in portions of British America. When fully developed it reaches a diameter of two ft. and a height of 80 ft. It produces small cones, and differs from all other native trees of its class in that its leaves fall in the winter. It is graceful and vigorous, and in New England is often planted for ornament. It thrives in land too moist for the European varieties, but succeeds also in high and even mountainous regions. Its timber is close-grained, very strong and durable. In hop-growing regions, it is esteemed for poles. It is in

LARCOM—LARDNER.

demand for building purposes, especially for cross-beams and rafters, and is considered superior to oak for knees and spars for ships.—The HIMALAYAN L. (*L. Griffithsii*), abounds in the Himalaya, but is generally a small tree 20–40 ft. high. Its cones are larger than those of the Common L. Its wood is very durable.

LARCOM, *lâr'kom*, LUCY: author: b. Beverly, Mass., 1826. She began writing stories and poems at an early age; worked some years in the Lowell cotton mills; removed to Ill. 1846, and taught school and studied in the Monticello female seminary; returned to Mass. and taught in the Norton Acad. six years; and was editor of *Our Young Folks*, a Boston Juvenile, 1865–74. She has edited *Breathings of a Better Life* (Boston 1867); *Hillside and Seaside in Poetry* (1876); and *Roadside Poems for Summer Travelers* (1877); and published *Ships in the Mist, and other Stories* (1859); *Poems* (1868); *An Idyl of Work, a Story in Verse* (1875); *Childhood Songs* (1877); *Wild Roses of Cape Ann, and other Poems* (1880); and a complete collection of her *Poetical Works* (1884).

LARD, n. *lârd* [F. *lard*—from L. *lardum*; It. *lardo*, *lard*]: the fat of swine after being melted and cooled. Until after the first quarter of the present century, lard was used only for culinary purposes, and as the base of various ointments in medical use. The enormous pork product in America rendered it necessary to find some other applications for this material, and large quantities were pressed at a low temperature, by which the stearine and oleine were separated. The stearine was used for candle-making; and the oleine soon became a very important article of commerce, as 'lard oil,' a valuable lubricant for machinery. As much as 14,000 tons of lard, stearine of lard, and lard oil have been exported in one year from the United States to Britain. British manufacture of stearine candles and fine oleine from palm oil, cocoa-nut oil, and various kinds of grease, has now largely taken the place of the American product. LARD, v. to fatten or enrich, as with bacon; to smear or cover with lard; to mix with by way of improvement, as a speech with quotations—generally applied in a depreciatory sense. LAR'DING, imp. LAR'DED, pp. LARDER, n. *lârdêr* [F]: the room or place in a house where meat or victuals are kept. LAR'DERER, n. *-dêr-êr*, one who has the charge of the larder. LARDACEOUS, a. *lâr-dâ'shūs*, resembling lard or bacon. LARDOONS, n. plu. *lâr-dônz'* [F. *lardon*, a small slice of bacon]: in *cooking*, bits of bacon about an inch square. LARDY, a. *-dî*, containing lard; full of lard. LARDACEIN, n. *lâr-dâ-sē'in*, an amyloid substance deposited in the liver and elsewhere in certain diseases.

LARDNER, *lârd'nêr*, DIONYSIUS, LL.D.: 1793, Apr. 3—1859, Apr. 29; b. Dublin: distinguished writer on physical science. He became known first by his *Treatise on Algebraical Geometry* (Lond. 1823), and by a work on the *Differential and Integral Calculus* (Lond. 1825). In

LARDNER—LARGE.

1828, he was appointed prof. of nat. philosophy and astronomy in Univ. College, London. In 1830, he projected a sort of encyclopedia, consisting of original treatises on history, science, economics, etc., by the most eminent authors; and 134 vols. were accordingly published, under the general name *Lardner's Cyclopædia*, 1830-44. Some of these vols. were from his own pen. A second issue was begun 1853. The most important of his scientific publications are his 'hand-books' of various branches of nat. philosophy (1854-56). L. was author of *Museum of Science and Art*, an excellent popular exposition of the physical sciences, with their applications. He died in Naples.

LARDNER, *lârd'nér*, JAMES L.: 1802, Nov. 20—1881, Apr. 12; b. Penn.: naval officer. He entered the U. S. navy as midshipman 1820, May 10; was promoted lieutenant 1828, May 17, commander 1851, May 17, capt. 1861, May 19, commodore 1862, July 16, and rear-admiral 1864, and was retired 1866, July 25. He distinguished himself at the capture of Port Royal and in the blockade of S. C. and Ga., and had commanded the E. Gulf blockading and the W. India squadrons.

LARDNER, NATHANIEL, D.D.: 1684-1768, July 24; b. Hawkshurst, in Kent: English Presb. divine. He studied first in London, afterward at Utrecht and Leyden. L. belonged to a body of English *Presbyterians*, who had become Unitarians. L. was not a popular preacher; but his *Credibility of the Gospel History*, and his *Jewish and Heathen Testimonies*, have secured for him a permanent place among modern apologists for Christianity. The last edition of his works, 10 vols., appeared at London, 1828.

LAREDO, *lâ-râ'dô*: city, cap. of Webb co., Tex.; on the Rio Grande river, and the International and Great Northern and the Texas and Mexico railroads; directly opposite New Laredo, Mex., where it connects with the Mexican National railroad. It was settled in the latter part of the 18th c. by Spaniards, and has since been a rendezvous for predatory Indians and cattle raiders from both countries. In recent years the Mexican govt. has coöperated with the United States in attempting to suppress boundary outrages, and since Pres. Diaz gave Gen. Ord permission for U. S. troops to pursue Indians and cattle thieves across the Rio Grande and on Mexican territory, L. has been more quiet. It contains 1 national bank (cap. \$120,000), 1 private bank, Rom. Cath. church, convent, and schools, and has considerable frontier trade. Pop. (1870) 2,046; (1880) 3,521.

LARES AND PENATES: see under LAR.

LARGE, a. *lârj* [F. *large*, plentiful, large—from L. *largus*, large, long: It. *largo*]: of great size; bulky; copious; liberal: N. in ancient music, longest mark of duration: thus semi-breve meant 1, breve 2, long 4, large 8: the breve is now the longest note in use. LARGE'LY, ad.

LARGESS—LARICIO.

-lā, widely; extensively; copiously; liberally. **LARGE'NESS**, n. *-nēs*, bulk; magnitude; greatness. **LARGE-HEART'ED**, a. having a liberal spirit and wide sympathies; generous. **LARGE-HEART'EDNESS**, n. the state of being large-hearted; liberality. **AT LARGE**, without restraint; in the full extent; diffusely.—**SYN.** of 'large': big; great; broad; wide; thick; extensive; huge; capacious; ample; abundant; plentiful; populous; full.

LARGESS, n. *lār'jēs* [F. *largesse*, a gift—from mid. L. *largitiā*—from L. *largiri*, to give or bestow bountifully—from *largus*, large]: a present; a liberal gift or donation; in early times, money which it was the practice to grant to heralds on certain state occasions, for proclaiming the style and title of the sovereign and his nobles. The regular fees, as recorded in one of the Ashmolean MSS. were, 'At the coronacion of the king of England, c£ appalled in scarlet. At the displaying of the kinge's banner in any campe, c. markes. At the displaying of a duke's banner, £20; at a marquis', 20 markes; at an earle's, 10 markes. The king marrying a wife, £50, with the giftes of the kinge's and queene's uppermost garments; at the birth of the kinge's eldest son, 100 markes, at the birth of younger children, £20. The king being at any syge with the crown on his head, £5.'

LARGHETTO, ad. *lār-gèt'tō* [It.—dim. of *largo*, broad, large]: musical term meaning 'somewhat slowly.' **LARGO**, ad. *lār'gō*, slowly—denoting the slowest of all the *tempi* in common use; employed especially in compositions where the sentiment is solemn. **LARGHISSIMO**, ad. *lār-gīs'ī-mō* [superl. of *largo*]: exceedingly slow; as slowly as possible.

LARGS, *lārgz*: small town on the coast of Ayrshire, Scotland, favorite resort for sea-bathers; beautifully situated on the Firth of Clyde, on a pleasant strip of shore, backed by hills, 18 m. below Greenock. Here, 1263, Alexander III. of Scotland, in a war between that country and the Norwegian colonies of Man and the Isles, defeated Hacon, King of Norway, who, with 160 vessels and 20,000 men, had descended on the coast of Ayrshire. The results were the immediate withdrawal of the invading force, and the abandonment within three years of the Norwegian pretensions to the Scottish Islands.—Pop. (1881) 3,079; greatly increased in midsummer.

LARIAT, n. *lār'ī-at* [Sp. *la reata*, *lariata*]: lasso; also a long rope for picketing horses in camp: it is fastened to a ring on the picket pin which is driven into the ground, permitting the horse a limited circle in which to graze: see **LASSO**.

LARICIO: see **PINE**.

LARIDÆ—LARK.

LARIDÆ, n. plu. *lăr'î-dē* [Gr. *laros*; L. *larus*, a gull]: family of birds, of the order *Palmipedes*, or *Natatores*, called *Longipennes* by Cuvier, from the length of wing characteristic of them. They are generally capable of protracted as well as rapid and graceful flight; all are sea-birds, though some resort to breeding-places at some distance inland, and some follow the course of rivers to considerable distances from the sea. Some are the most oceanic of all birds, being often seen far from any shore. They generally take their prey either by a sudden descent to the water during flight, or while swimming, and are not good divers. The hind-toe is small and free; the bill is pointed or hooked, but destitute of lamellæ. Gulls, Skuas, Terns, Petrels, Shearwaters, Albatrosses, Noddies, Skimmers, etc., belong to this numerous family, which has many representatives in all parts of the world. They prey chiefly on fishes and mollusks, and are in general ready to eat any animal garbage. Some writers separate in the L. a sub-family *Larinæ*, including the gulls proper: see GULL.

LARISSA, or **LARISA**, *lâr-rîs'sâ* (called by the Turks *Yenitschir*): famous in ancient times as the chief town of Thessaly, and still an important place. By the negotiations inaugurated at the Berlin Congress 1878, and concluded 1881, L. was ceded by Turkey to Greece. It stands on the Salambria (anc. *Peneus*), in the great fertile plain of Central Thessaly, has a brisk trade, and manufactures silk and cotton goods. L. is the seat of a Greek abp., and has several churches, as well as numerous mosques. Pop. 30,000.

LARISTAN, *lâr-îs-tân*, AND **MOGISTAN**: two maritime provinces of Persia, bounded s. by the Persian Gulf, and the Gulf of Oman, and n. by the provinces of Farsistan and Kerman.

LARIX: see **LARCH**.

LARK, n. *lârk* [AS. *lac*, play; Sw. *lek*, sport; Goth. *laiks*; Icel. *leikr*, a game, sport]: fun, frolic, or joking, sometimes with mischief: V. to engage in fun or frolic by way of sport, sometimes with mischief. **LARK'ING**, imp. **LARKED**, pp. *lârkt*. **SKYLARKING**, n. *skî'lâr-k'îng*, among *seamen*, mounting to the highest yards and sliding down the ropes for amusement; fun or frolic—a convenient word covering much mischief. *Note*.—In **LARK**, frolic, *r* is intrusive, as the root-words show; the word is an old one, but has been popularly spelled and treated as identical with **LARK**, the bird, which it is not. The spelling should be *laak* or *lahk*—see **Skeat**.

LARK, n. *lârk* [AS. *laferc*; Scot. *laverock*; Dut. *lew-erck*; Icel. *lævirki*; Dan. *lærke*, a lark]: singing bird of various species: see below: V. to catch larks. **LARK'ING**, imp. **LARKED**, pp. *lârkt*. **LARK'ER**, n. one who catches larks. **LARK'SPUR**, n. a plant with showy flowers, usually of vivid blue—named from the fancied resemblance of the horned nectary to the spur of a lark.

LARK.

Larkspur is the name of a genus (*Delphinium*) of nat. ord. *Ranunculaceæ*, annual and perennial herbaceous



Palmated Larkspur or Stavesacre (*Delphinium stavisacria*).

plants, natives of the temperate and cold regions of the n. hemisphere. They have five sepals, the upper spurred; four petals, distinct or united into one, the two upper having spurs inserted into the sepaline spur; and 1-5 many-seeded follicles. Some are well known and favorite garden-flowers, as the UPRIGHT L. (*D. Ajacis*), native of Switzerland, and BRANCHING L. (*D. consolida*), native of most parts of Europe. *D. glaciale* is one of the most alpine plants in the world.

LARK (*Alauda*): genus of small birds of order *Insesores*, section *Conirostrès*, type of a family *Alaudidæ*, to the whole of which the English name is commonly extended. In this family, the bill, though stout, and nearly conical, is more lengthened than in buntings and finches. The toes are long, and separate to the base; the claws long



Sky Lark (*Alauda arvensis*).

and little curved, that of the hind-toe generally very long. The true larks (genus *Alauda*) have also long wings, and great power of flight. Many are birds of passage.

LARK.

In common with almost all the family, they nestle and seek their food—seeds, insects, worms, etc.—on the ground; and in admirable harmony with this mode of life, their plumage exhibits much uniformity of coloring, so that when on the ground they may not readily be noticed by their enemies. The L. family is very widely distributed over the world. The COMMON L., FIELD L., or SKY L. (*Alauda arvensis*), is one of the best-known British birds, and notwithstanding the tameness of its brown plumage, is a universal favorite, on account of the sweetness of its cheerful song, which it pours forth while soaring and floating in the air, and which every one associates with pleasant scenes and delightful days. It more rarely sings on the ground. It is in great repute as a cage-bird, and sings well in confinement, but flutters its wings while singing, as if still desirous of soaring in the air. It abounds chiefly in open but cultivated districts. It is common in most parts of Europe, but from the more n. parts, it migrates southward on the approach of winter. It is a native also of Asia, and is a winter visitant of n. Africa. It is not found in America, except that it has been introduced on Long Island (N. Y.), and is thriving there. It makes its nest generally in an open field, often under shelter of a tuft of herbage, or a clod of earth; lays four or five mottled eggs, and generally produces two broods in a season. It is not truly gregarious in summer, but in winter large flocks assemble; and at this season multitudes of larks are taken for the table in s. England, in France, and other countries. They are often caught by horse-hair nooses, attached to a long line of packthread, to which the nooses are fastened at distances of about six in., the line being pegged to the ground at intervals of 20 yards. This mode is most successful when the ground is covered with snow, and a little corn is scattered along the line. The Clap-net (q.v.) and Trammel-net (q.v.) also are employed by lark-catchers, and great numbers of larks are taken in some parts of England by dragging the trammel-net over the stubbles and pastures. *Twirling for larks* is a peculiar mode of turning to account the attractiveness which any glittering object possesses for these birds. It is a French practice. A piece of highly polished mahogany, or of some common wood inlaid with bits of looking-glass, is fastened on the top of a rod, so as to reflect the sun's rays upward, and is made to twirl by means of a string. Larks are greatly attracted by it, congregate around it, and are readily shot in large numbers.—The CRESTED L. (*A. cristata*), very similar in size and plumage to the common L., but having the feathers of the crown of the head more distinctly developed into a crest, is very common in many parts of Europe, and abundant near Calais, but is very seldom seen in Britain.—The WOOD L. (*A. arborea*), a smaller species, frequent in parts of England, rare in Scotland, is a bird of very delightful song, and

LARKHANA—LARNE.

usually sings perched on the branch of a tree: it frequents wooded districts. Its nest, however, is made on the ground.—The SHORE L. (*A. alpestris*), very rarely found in Britain, inhabits n. Europe, n. Asia, and N. America, the only N. American species. Its song is very sweet, and gladdens the visitor of such desolate shores as those of Labrador, where it breeds, amid the tufts of mosses and lichens, with which the bare rocks are interspersed. It is a winter visitant of New England, and is sometimes seen as far s. as Georgia. The head has two erectile tufts of feathers, somewhat resembling those of horned owls. Black, white, and yellow vary the brown plumage of the Shore Lark.

LARKHANA, *lâr-kâ'nâ*: cap. of the dist. of L. in Sindh, 145 m. n. of Hyderabad. It manufactures silk and cotton, besides being one of the largest corn-marts in the country. Pop. abt. 12,000.

LARMES, *lârm*, in British Heraldry: applied to the field bestrewed with an indefinite number of drops of a blue color, when the field is said to be *gutté de larmes*.

LARMIER, n. *lâr'mî-êr* [F.—from *larme*, a tear or drop—from L. *lacryma*, a tear]: in *arch.*, the corona; the eaves or drip of a house.

LARNACA, or LARNAKA, *lâr'na-kâ* (anc. *Citium*): town of Cyprus (q.v.) in lat. 34° 55' n., and long. 33° 37' e., near the s. coast of the island. It has a good roadstead, but the town wears a decayed and filthy aspect. The chief public buildings are the Greek church of St. Lazarus, a Rom. Cath. church, and the Franciscan monastery. L. is the chief seat of the commerce of the island, and the residence of European merchants and consuls. There is steamboat communication regularly with Constantinople, Smyrna, Alexandria, and Marseille, and occasionally with England. There is an overland line of telegraph from L. to Cape St. Andreas, thence by submarine cable to Latakia, in Syria. The salt lakes in the neighborhood, alluded to by Pliny, are still worked: 40 years ago they were leased for \$2,000 a year. Within recent years they yielded the government \$200,000 a year. This revenue fell 1879 to less than \$100,000, in consequence of a rise of price in the salt, which was chiefly bought by the coast towns of Syria. Value of exports (1874), chiefly of grain, cotton, silk, opium, salt, wool, umber, and locust beans, \$1,590,000; of imports, \$500,000. The British occupation caused an influx of merchants, the result being a collapse in trade. Mounds of débris mark the site of ancient Citium. A bas-relief of B.C. 8th c., with cuniform inscriptions, was recently found here; and 600 gold staters of Philip and Alexander the Great were discovered 1870.—Pop. of L. about 10,000.

LARNE, *lârn*: market and seaport town of Ireland, co. of Antrim, on Lough Larne. A mail-steamer sails daily between L., which is connected with the Northern

LARNED—LAROCHEFOUCAULD.

Counties railway, and Stranraer, in Scotland. L. possesses two large flour-mills, and extensive bleaching-grounds. Pop. (1881) 3,995.

LARNED, *lâr'nĕd*, AUGUSTA: author: b. Rutland, N. Y., 1835, Apr. 16. She received a seminary education, became a newspaper and magazine writer in New York, edited *The Revolution* 1870, and published *Home Stories*, 6 vols. (New York, 1872-3), *Talks with Girls* (1873), *Old Tales Retold from Grecian Mythology* (1875), *The Norse Grandmother*, *Tales from the Eddas* (1880), and *Village Photographs* (1887).

LARNED, BENJAMIN FRANKLIN: 1794, Sep. 6—1862, Sep. 6; b. Pittsfield, Mass.: soldier. He entered the U. S. army as ensign 1813, Oct. 21; was promoted 1st. lieut. 1814; brevetted capt. for gallantry in the defense of Fort Erie; was retained in the army on its reorganization, and appointed paymaster and maj. 5th U.S. inf.; promoted deputy paymaster-gen. and lieut.col. 1847; and succeeded Gen. Nathan Towson as paymaster-gen. and col. 1854. In the early part of the civil war he accomplished a reorganization of his department, but his health gave way under the strain.

LARNED, SIMON: 1754-1817; b. Thompson, Conn. After service as an officer in the revolutionary army he became a resident of Pittsfield, Mass., 1784; was in congress 1804, 5, and was col. of the 9th infantry in the war of 1812 with Great Britain. Afterward he held the office of sheriff of Berkshire county.

LARNICA: see LARNACA.

LAROCHEFOUCAULD, *lâ-rosh-fô-kô'*, FRANÇOIS (Duke of), Prince of Marsillac: 1613, Sep. 15—1680, Mar. 17; b. Paris; of an old French family of great celebrity, whose original seat was the small town of L., near Angoulême. The history of the family is traced back to 1026, when a certain Foucauld, first seigneur de la Roche, is spoken of in a charter of an abbey of Angoulême as *vir nobilissimus Fulcaudus*. In the religious wars of the 16th c., it embraced the cause of the Protestants. L. was one of the greatest of maxim writers. From youth he was fond of literary pursuits; and after having been involved in intrigues against Cardinal Richelieu, and in the tumults of the Fronde, he retired into private life, cultivated the society of the most eminent literary persons of his time, Boileau, Racine, and Molière, and composed his famous *Mémoires* (Cologne 1662; Amst. 1723, etc.), in which he gives a simple but masterly historic account of the political events of his time. In 1665, he published *Réflexions ou Sentences et Maximes Morales*, a work containing 360 detached thoughts, of which, perhaps, the most widely celebrated is his definition of hypocrisy, as 'the homage which vice renders to virtue.' The book is regarded as a model of French prose, and the maxims show great acuteness of observation, and a clear perception of the prevalent corruption

LAROCHEFOUCAULD—LAROCHEJAQUELEIN.

and hypocrisy of his time. Their literary style is unrivalled for clearness, fulness, brevity, and point. L.'s character was entirely reputable. His political action has been censured, but it has been well remarked that the keenness of his intellect, with his apprehension of both sides of a question may easily have lessened his capacity for instant resoluteness in action. His *Œuvres Complètes* were edited by Depping (Par. 1818), and his writings have been commented on by a host of critics of the most different schools, as Voltaire, Vinet, Sainte-Beuve, and Victor Cousin.

LAROCHEFOUCAULD, FRANÇOIS ALEXANDRE FRÉDÉRIC, Duke of LAROCHEFOUCAULD-LIANCOURT, *-le-ông-kôr'*: philanthropist: 1747, Jan. 11—1827, Mar. 27. He was representative of the nobles of Clermont in the states-general, and was a zealous advocate of reform, but sought to preserve the monarchy. After the catastrophe of Aug. 10, he fled to England, and lived in great penury, till he obtained back, 1794, some fragments of his property. He then visited the United States, and published *Voyage dans les Etats-Unis d'Amerique fait en 1795-97* (8 vols. Par. 1798). Having returned to Paris, he lived in retirement, occupied only with the extension of vaccination and similar works of benevolence. Napoleon restored him his ducal title 1809. After the Restoration, he was made a peer, but soon gave offense to the court, by opposing its unconstitutional policy. He labored zealously in promotion of many patriotic and philanthropic objects. He founded the first savings-bank in France.

LAROCHEJAQUELEIN, *lâ-rosh-zhâk-lâng'*, DU VERGER DE, HENRI, Count (of L.): 1772-1794, Mar. 4; of an old noble family of France. The name Du Verger is derived from a place in Poitou. L.'s ancestor, Guy du Verger, married 1505 the heiress of the seigneur of Larochejaquelein, and of his descendants several distinguished themselves as soldiers, after the beginning of the French Revolution, by their strenuous efforts in the cause of the Bourbons. L. was an officer in the guard of Louis XVI., and after 1792, Aug. 10, left Paris, and put himself at the head of the insurgent royalists in La Vendée. He signalized himself by many heroic deeds, and for a time successfully repelled the republican forces, but was defeated by Gens. Westerman, Müller, and Tilly, 1793, Dec. 13, and escaped with difficulty. He raised a new body of troops in Upper Poitou, but was killed in battle at Nouaillé.—LOUIS DU VERGER, Marquis de Larochejaquelein (1777-1815, June 4), bro. of Henri, emigrated at the commencement of the Revolution; returned to France 1801, but resisted all Napoleon's efforts to win him, and 1813 placed himself at the head of the royalists in La Vendée. Louis XVIII. appointed him, 1814, to the command of the army of La Vendée, and during the hundred days he maintained the royalist cause there, supported by the British. He fell in battle at Pont-

LA ROCHELLE—LARVA.

des-Mathis.—MARIE-LOUISE VICTOIRE, Marquis de Larochefoucauld (1772–1857), wife of Louis du Verger, published *Mémoires of the War in La Vendée*, of which she was an eye-witness (Bordeaux 1855), which are of great value, and have gone through many editions.

LA ROCHELLE': see ROCHELLE, LA.

LARREY, *lâ-râ'*, DOMINIQUE JEAN, Baron: 1766–1842, July 24; b. Baudéan, near Bagnères-de-Bigorre: French surgeon. He studied medicine with his uncle, Alexis L., and 1792 was appointed second physician to the Hôtel-des-Invalides, and 1793 accompanied the French army to Germany and Spain, when he invented the *ambulance volante*, for transporting the wounded. Napoleon summoned him to Italy 1797, and he accompanied the expedition to Egypt. In 1805, he was placed at the head of the medico-surgical dept. in the French army, and was created a baron of the empire. He was wounded and taken prisoner at Waterloo, and at the restoration lost his rank and pension; the latter, however, was restored 1818; and he continued to fill important and honorable offices till 1836, when he retired from that of surgeon-gen. of the Hôtel-des-Invalides. Returning from Algeria, where he had been as inspector of military hospitals, he died at Lyon. Apart from his skill in practice, L. has a high scientific reputation, and was the author of very valuable books on various medical subjects.

LARRUP, v. *lâr'rûp* [Dut. *larp*, a lash; *larpen*, to thresh as corn in a peculiar manner]: among seamen, to beat or thrash. LAR'RUPPING, n. a good beating.

LARRY, n. *lâr'rî*, or LORRY, n. *lôr'rî*: a coal-truck on a railway; a long low wagon with springs, and without sides.

* LARUM, *lâr'ûm*: an abbreviation of ALARUM: see ALARM.

LARVA, n., *lâr'vâ*, LARVÆ, n. plu. *lâr'vê* [L. *larva*, a ghost, a mask: F. *larve*, larva: It. *larva*, a mask]: an insect in the caterpillar or grub state. LAR'VAL, a. -*vâl*, of or pertaining to larvæ. LAR'VATED, a. -*vâ-têd*, masked; clothed as in a mask. LAR'VIFORM, a. -*vî-fawrm* [L. *forma*, shape]: like a larva.—*Larva*, in natural history, is the denomination of animals which undergo transformation, in that state in which they exist first after issuing from the egg. The *egg* is the first state of an insect, the *larva* the second, the *pupa* or *chrysalis* the third, the *imago* the fourth or perfected state. Until recently, the L. state was known in insects only, and the term is still commonly used with regard to them only; but it has been discovered that many marine animals spend a considerable part of their existence in such a state, during which they are often extremely different from what they become after their next transformation; some of them, as the young of the Cirrhopods, swimming about freely in the L. state, but becoming firmly fixed to one spot when they have reached their perfect development, and—stil'

LARVIPARA—LARYNGITIS.

more remarkable—possessing eyes in the former state, and becoming destitute of them in the latter. The L. state of crabs exhibits a very singular form, long known as a distinct genus of crustaceans, under the name *Zoëa*. The young of at least some Entozoa pass through a L. state; those of the tape-worms were formerly regarded as creatures altogether distinct, and received the generic name *Scolex*, which when now used is with regard to these animals equivalent to L.—The larvæ of insects differ very much in the degree of their development, the differences being characteristic of different orders; some resembling the perfect insect, except in the lack of wings, and others being very unlike it. The larvæ of many insects, particularly those very unlike the perfect insect, as grubs (coleopterous larvæ), maggots (dipterous larvæ), and caterpillars (lepidopterous larvæ), accumulate fat in great quantity, which serves to sustain them during their *Pupa* (q.v.) state, in which they take no food. The same accumulation of fat does not take place in larvæ more nearly similar to the perfect insect, as in neuropterous insects, whose pupæ are active and voracious.

LARVIPARA, n. plu. *lâr-vîp'ă-ră* [L. *larva*, a mask; *parîō*, I bring forth]: a name given to those insects which bring forth larvæ or grubs instead of eggs. LARVIPAROUS, a. *-ă-rūs*, producing young in the state of larvæ or grubs.

LARYNGITIS, or INFLAMMATION OF THE LARYNX: inflammation of the larynx; either an acute or a chronic disease. Acute L., in its severe form, commences with a chill, followed by fever with full strong pulse, hot skin, and flushed face. There is also soreness of the throat, hoarseness of the voice, great difficulty in swallowing, and a feeling of extreme constriction of the larynx. There is a painful stridulous cough, but only a little mucus is ejected. Great difficulty of breathing soon comes on, the act of inspiration being prolonged, and wheezing, in consequence of the swollen membrane of the glottis impeding the entrance of air. On examining the fauces, the epiglottis (see LARYNX) is observed to be of bright red color, erect, and so much swollen as not to be able to descend and close the glottis during deglutition. The patient shows great anxiety and distress; his lips become blue, his face of a livid paleness, his pulse irregular and very feeble, and at length he sinks into a drowsy state, often preceded by delirium, and quickly followed by death. The disease is very rapid, ending when fatal, in three or four days, and occasionally in less than one day.

The most frequent cause of L., whether mild or severe, is exposure to cold and wet, especially when in perspiration. It frequently arises also from direct injury to the larynx, as from attempting to swallow boiling water or corrosive fluids, from inhaling irritating gases, etc.

LARYNGOSCOPE—LARYNGOTOMY.

In severe cases, the strongest antiphlogistic treatment must be at once adopted, as general bleeding, leeching, and either tartar emetic or calomel. If these fail, the only remedy on which much reliance can be placed is tracheotomy. In chronic L. there is hoarseness, the voice is altered, and various morbid sensations are felt in the larynx, which excite cough. If the disease goes on to ulceration, phthisis or syphilis is probably its cause. For other diseases of the Larynx, see LARYNX. For Laryngotomy, see TRACHEOTOMY.

LARYNGOSCOPE, n. *lär-īng'gō-skōp* [Gr. *larungx*, the upper part of the windpipe; *skopēō*, I view or see]: small mirror for examining the larynx: the mirror is placed on a handle or stalk attached to its margin, at an angle of from 120° to 150°, the stalk being about six inches in length and of flexible metal, so that it can be bent at the will of the operator. LARYNGOSCOP'IC, a. *-skōp'ik*, relating to the inspection of the larynx. LARYNGOSCOPY, n. *-gōs'ko-pī*, art or practice of exploring the larynx with a laryngoscope. Although attempts had been previously made to explore the recesses of the larynx by means of a reflecting mirror, it was not until two German physiologists, Drs. Turck and Czermak, took up the subject 1857,8, that the great importance of laryngoscopy was generally recognized. The mouth-piece of a large reflector, with a central opening through which the observer looks, is held between the molar teeth; or, better, the reflector may be attached to a spectacle frame by a stiffly working ball-and-socket joint. The rays of the sun or of a good lamp are concentrated by this reflector on the laryngeal mirror, which is placed against the soft palate and uvula. The laryngeal mirror, introduced with the right hand, which rests by two fingers on the jaw, is maintained at such an inclination that it throws the light downward, and illuminates the parts to be examined, while it reflects the images of these parts into the eye of the observer through the central opening of the reflector. Thus he can look through the larynx into the trachea or windpipe. By use of this instrument can be seen the actual position of small tumors, ulcers, etc., whose existence could otherwise have been only suspected; and the precision and accuracy of diagnosis thus attained make available rational means of local treatment to an extent previously impossible.

LARYNGOTOMY, n. *lär-īng-gōt'ō-mī* [Gr. *larungx*, the upper part of the windpipe; *tomē*, a cutting]: operation of cutting into the larynx to admit of breathing in cases of obstruction: see TRACHEOTOMY.

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LARYNX, n. *lăr'ingks* [L. *larynx*—from Gr. *larungx*, the upper part of the windpipe, gen. *larunggos*, of the upper part of the windpipe]: the upper part of the trachea or windpipe. **LARYNGEAL**, a. *lăr'in-jě'äl* or *lăr'in'jě-äl*, pertaining to the larynx; also **LARYNGEAN**, a. *lăr'in-jě'an* or *lăr'in'jě-an*. **LARYNGISMUS**, n. *lăr'in-jis-mūs*, the spasmodic action of the larynx. **LARYNGITIS**, n. *lăr'in-jit'is*: see **LARYNX**, **THE**.

LAR'YNX, THE: the organ of voice, also taking part in the respiratory process, as all air passing either to or from the lungs must pass through it. It is a com-

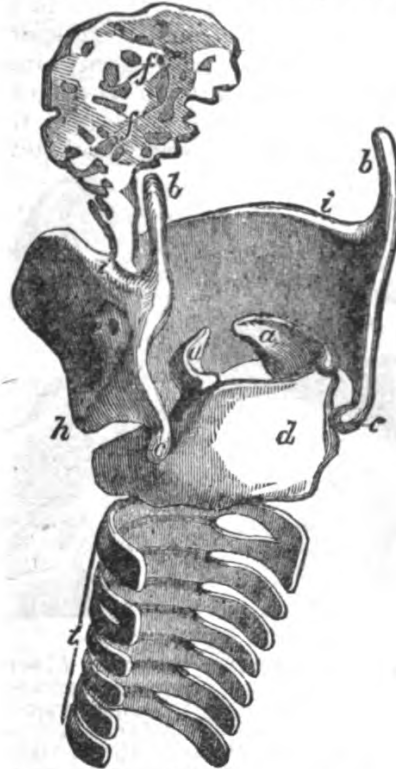


Fig. 1.

(From Todd and Bowman.)

Cartilages of larynx and epiglottis, and upper rings of trachea, seen from behind: *a*, arytenoid cartilages; *b*, superior cornua of thyroid cartilage; *c*, its inferior cornua; *d*, posterior surface of cricoid; *f*, epiglottis, with its perforations; *i*, upper margin of thyroid; *h*, its left inferior tubercle; *t*, trachea.

plex mechanism, resembling a box composed of pieces of cartilage, which may be moved on each other, and enclosing the membranous bands (the *chordæ vocales*) by which the vocal vibrations are produced.

It is situated between the *trachea*, or windpipe, and the base of the tongue, at the upper and front part of the neck, where it forms a considerable projection (especially in men) in the mesial line; and it opens superiorly into the *pharynx*, or throat, and inferiorly into the windpipe.

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The cartilages of which the skeleton of the L. is composed are five in number—viz., the thyroid and the cricoid cartilages, the epiglottis, and the two arytenoid cartilages.

The *thyroid* [Gr. shield-like] cartilage consists of two square plates of cartilage united in front at an acute angle, which forms the projection commonly known as the *pomum Adami*, or Adam's apple. Each of these plates is prolonged at the upper and lower posterior corners. The thyroid cartilage forms almost the whole of the anterior and lateral walls of the larynx.

The *cricoid* (Gr. ring-like) cartilage is a ring whose lower margin is parallel to the first ring of the trachea, to which it is united by fibrous membrane. Its upper border is connected in front with the lower border of the thyroid cartilage by a thick yellow fibrous tissue. It presents two articular surfaces on either side, viz., a

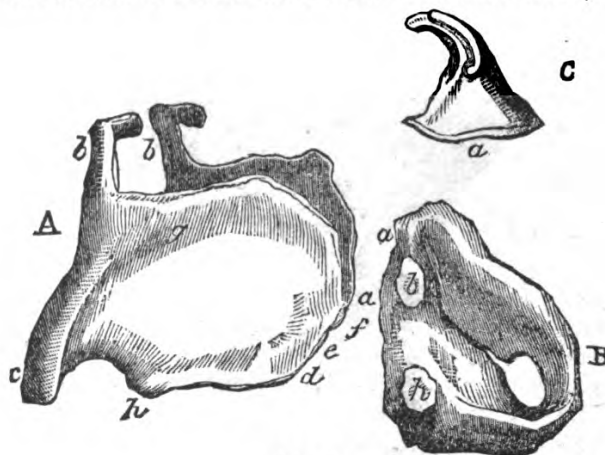


Fig. 2.

A, side view of thyroid cartilage: *a*, the notch; *b*, superior, and *c*, inferior cornua; *g*, *h*, superior and inferior tubercles; *f*, pomum Adami. B, side view of cricoid cartilage: *a*, posterior superior margin; *b*, articulating surface of right arytenoid cartilage; *h*, surface articulating with inferior cornua of thyroid. C, the right arytenoid cartilage: *a*, its base articulating with the upper margin of the cricoid.

lower one (*h* in B, fig. 2), which articulates with the inferior cornua of the thyroid cartilage, and an upper one (*b* in B, fig. 2), which is oval in form, and supports an arytenoid cartilage. The *arytenoid* [Gr. ladle-like] cartilages are pyramidal bodies resting on the oval articular surfaces at the upper and posterior part of the cricoid cartilage. When *in situ*, they present a concave posterior surface (fig. 1). From their connection with the vocal cords, and from their great mobility as compared with the two larger cartilages, the arytenoids act a very important part in the mechanism of the larynx. The *epiglottis* is a very flexible cartilaginous valve (fig. 1, *f*), situated at the base of the tongue, and covering the opening of the larynx. Its direction is vertical, except during deglutition, when it becomes horizontal. It is attached inferiorly by a kind of pedicle to the angle of

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the thyroid cartilage. Upon removing the investing mucous membrane, the cartilage is seen to be perforated by numerous foramina, *f*. Each perforation admits some fasciculi, of yellow, elastic, ligamentous tissue, which expands on its anterior aspect, and secures the return of the epiglottis to its vertical position, independently of any muscular action. Such is the skeleton of the larynx, which hangs from the hyoid bone, with which it is connected by the thyro-hyoid ligament and certain muscles.

The various cartilages which have been described are connected to one another by ligaments, the chief of

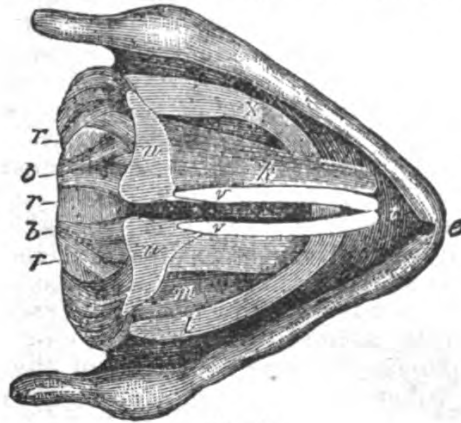


Fig. 3.

View of larynx from above, after Willis. *b*, ligaments uniting arytenoid and cricoid cartilages; *e*, thyroid cartilage in front; *k*, left thyro-arytenoid muscle, right removed; *l, r, x*, cricoid cartilage; *m*, right crico-arytenoid muscle; *n*, arytenoid cartilage; *t, v*, vocal cords.

which are known as the true and false vocal cords. In their quiescent state, the true vocal cords do not lie parallel to each other, but converge from behind forward (see fig. 3). The length of the vocal cords is greater in the adult male than in the adult female, in the ratio of three to two. In infancy, they are very short, and increase regularly from that period to the age of puberty. The mucous membrane of the L. is part of the great respiratory tract (see MUCOUS MEMBRANE), and is remarkable for its great sensibility.

The length of the chink or aperture of the glottis, which is directed horizontally from before backward, varies, like the vocal cords, until the period of puberty, when its length, in the male, undergoes a sudden development, while in the female it remains stationary. In the adult male, it is about eleven lines in length.

The L. is provided with two sets of muscles, viz., the *extrinsic*, by which the whole organ is elevated or depressed, and the *intrinsic*, which regulate the movements of the various segments of the organ in relation to one another. By the action of these latter muscles, aided, in some cases, by the extrinsic muscles, the tension of the vocal cords may be increased or diminished,

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and the size of the opening of the glottis regulated at will.

The nerves of the L. are derived from the superior and inferior laryngeal branches of the pneumogastric or vagus nerve. The superior branch is for the most part sensory (being mainly distributed to the mucous membrane), while the inferior branch communicates motor-power to all the intrinsic muscles except the crico-thyroid.

That the L. is the organ of voice, is easily proved. Thus, alteration in the mucous membrane covering the vocal cords, causes hoarseness or other change of voice; ulceration of the vocal cords, destroys or injures the voice; opening the trachea below the vocal cords, or section of the inferior laryngeal nerves, destroys the voice; and sounds like those of the voice may be produced by experiments on the dead larynx.

Diseases of the Larynx.—Of these the most serious is *acute inflammation* or *Laryngitis* (q.v.).

Edema, or *swelling of the glottis*, though of common occurrence in laryngitis, may be developed independently of inflammation, from obstruction of the veins leading from that part, or from other causes. Tracheotomy affords the patient almost the only chance of life.

Chronic inflammation and *ulceration* of the L. are very common in tubercular consumption and in secondary syphilis. In these cases, the laryngeal affection is merely a local manifestation of a general disease.

LA SALLE, *la sāl*: city in La Salle co., n. Ill.; at head of navigation on Illinois river, 110 m. n.e. of Springfield, about 80 m. s.w. of Chicago, 1 m. from Peru; at the terminus of the Ill. and Mich. canal, and junction of the Ill. Central and Chicago and Rock Island railroads. L. S. is a thriving city with manufactures of glass, sulphuric acid, hydraulic cement; also machine-shops and breweries. There is export of ice to the southern market, and a notable zinc rolling-mill. The annual product of bituminous coal mines near the city is stated at 1,000,000 tons. Pop. (1870) 5,200; (1880) 7,847,

LA SALLE, ABBÉ DE: see SCHOOLS, BROTHERS OF CHRISTIAN.

LA SALLE, *là sâl'*, RENÉ ROBERT CAVELIER, Sieur DE: 1643, Nov. 22—1687, Mar. 20; b. Rouen, France: explorer. He became a Jesuit and teacher in early life, but tiring of his vocation and surroundings, withdrew from the soc. and went to Canada 1666. While engaging in the business of trading in furs, he conceived a plan for attempting to discover a way to China across the American continent. In 1669 he sold an estate given him by the priests of the Seminary of St. Sulpice, feudal owners of the island of Montreal, and with two priests of the order of St. Sulpice, who proposed seeking sites for missionary work in the upper lake region, he started

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on his tour of exploration. At Lake Ontario his companions parted company with him, but he found a small escort body, explored the lake, then made his way southward and westward, discovered the Ohio river 1671, and descended it as far as Louisville, Ky. On a second journey he ascended Lake Michigan, crossed Ill. to the Illinois river, and then, according to some authorities who are contradicted by others, he followed the Illinois river to its junction with the Mississippi. If he descended the Illinois as claimed by some, he and not Marquette and Joliet, is entitled to the honor of its discovery; but friends of the latter assert with evidence that he merely explored the upper region of the Illinois. In 1673 he was ennobled by the French govt. and granted a patent for Fort Frontenac and adjoining lands, the site of the present city of Kingston, Ontario, Canada. With every opportunity for acquiring wealth, he still clung to his project of discovering a n.w. passage. In 1677 he went to France, and after submitting his plans for opening the great west to settlement and trade and continuing his journey of exploration, he was granted authority to explore and occupy the west, provided he did not put the govt. to any expense. He soon acquired all the money needed for his enterprise, and was accompanied on his return by Chevalier de Tonti and Louis Hennepin. In 1678, Nov., he started from Fort Frontenac, not to carry out his plans for seeking the route to China, but to confine his travels to the great west, and to establish French colonies along the Mississippi river, which he believed made its way into the Gulf of Mexico and not to the Pacific Ocean, as held by others. At Niagara he built a small vessel, the *Griffin*, and in the summer of 1679 he ascended the lakes to Mackinaw, then Lake Michigan to St. Joseph river, where he crossed to the Illinois river, which he descended to a point below the present city of Peoria, and built his first fort, Crève-cœur. While so engaged, he learned that creditors had taken possession of his property in Canada. Leaving his party under command of Chevalier de Tonti, he made a journey of more than 1,000 m., mostly on foot, to Fort Frontenac, arranged with his creditors, obtained fresh supplies, and when about returning learned that his party had rebelled and was marching back to murder him. Hastening forward, he met the returning party on Lake Ontario, forced them to submission, and with them resumed the journey to the Illinois river. On reaching his camp, he found that the entire region had been desolated by a war party of Iroquois Indians. His misfortune forced him to return to Canada for fresh resources in money and supplies; and after much trouble with his creditors, he formed a new party of 30 Frenchmen and a band of trusty Indians, returned to the Illinois country, descended the Illinois river to its mouth, and embarking on the Mississippi river 1682, Feb. 6, made the passage to its mouth, and Apr. 9 raised a shaft

LASCAR—LASCARIS.

displaying the arms of France on the shore of the Gulf of Mexico, took possession of the territory between the Alleghany and the Rocky Mountains in the name of the king, and called it Louisiana. Returning to Canada to prepare for establishing a fortified settlement on the Gulf, he was so harassed by the fur-traders and La Barre, the gov. who had succeeded his friend Frontenac, that he went to France, reported his actions and submitted his plans for holding and developing the new territory for the benefit of France, and was warmly supported by the court. A royal squadron was fitted out for him, and with a considerable party of colonists he sailed for the Gulf of Mexico 1684. Unfortunate differences with the naval commander broke out, the vessels lost their way, one loaded with provisions and other stores was wrecked, not without suspicions of design; and 1685, Mar., the squadron came to anchor, not at the mouth of the Mississippi river as intended, but in Matagorda Bay, Tex. A fort was there built, and then L. S. spent nearly two years searching for the mouth of the Mississippi. Early in 1687, Mar., he reached a branch of Trinity river, and while arranging to return to Canada for supplies for his colonists, he was treacherously murdered by some of his own men, hidden in ambush. See FRONTENAC, LOUIS DE BUADE: HENNEPIN, LOUIS: JOLIET, LOUIS: MARQUETTE, JAMES.

LASCAR, n. *lās-kēr'* [Hind. *lashkar*, camp-follower]: in *E. Indies*, a native sailor, especially on British ships; a laborer employed about arsenals, and with the menial work of the artillery. The Lascars are good seamen, but irritable and revengeful; therefore they are not generally made the majority in a crew.

LASCARIS, *lās'ka-rīs*, CONSTANTINE: Greek scholar of the 15th c.: b. Constantinople, d. 1493; of the family which in the second c. previous had given three emperors to Nicæa. He was a refugee, after the capture of Constantinople by the Turks, 1453, and one of the first founders of Greek studies in the west. He was received with distinction by Francesco Sforza, Duke of Milan, 1454, who intrusted to him the education of his daughter Hippolyta; but his more important labors were at Rome, where he settled in the train of the learned Greek cardinal, Bessarion, and, finally, at Naples and Messina, where he taught rhetoric and Greek letters until his death. His Greek grammar, entitled *Erotemata*, dated 1476, is the earliest printed Greek book, and is known chiefly through a Latin translation printed at the Aldine press, and frequently reprinted. His library, which is very valuable, is now in the Escorial.

LASCARIS, JOANNES or JANUS (surnamed RHYNDACENUS): abt. 1445–1535; b. Bithynia; of the same family with Constantine L. He was one of those whom Lorenzo de' Medici employed in the collection of ancient, especially Greek classical authors, of whom L. brought

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home a valuable collection from Mount Athos. On the death of Lorenzo, L. went to Paris, where he taught Greek under Charles VIII. and Louis XII.; but he eventually settled in Rome, where he was appointed by Leo X. to the superintendence of the Greek press which that pontiff established. L. edited several of the *editiones principes* at the Roman press. He was employed as ambassador at the court of Francis I., and afterward at Venice, and died in Rome. See Villemain's *Lascaris, ou les Grecs du 15^m Siècle* (Paris 1825).

LAS CASAS, *lâs kâ'sâs*, BARTOLOMÉ DE, Bishop of Chiapa, in Mexico (surnamed the *Apostle of the Indians*): missionary and philanthropist: 1474–1566, July; b. Seville, of French descent. He studied at Salamanca. In 1502, he accompanied Don Nicolas Ovando, who was sent out as gov., to St. Domingo. Eight years after his arrival there, he was ordained to the priesthood, the first so ordained in the colonies, and was subsequently appointed to a charge in Cuba. Here he signalized himself by exertions in behalf of the oppressed Indians. To oppose the law which divided them among the conquerors, he went to Spain, where he prevailed on Cardinal Ximenes to send a commission of inquiry to the W. Indies; and still dissatisfied, he revisited Spain, to procure the adoption of stronger measures for the protection of the natives. Finally, to prevent the entire extirpation of the native race by the toils to which they were subjected, he proposed that the colonists should be compelled to employ negro slaves in the more severe labors of the mines and sugar plantations; and the proposal was adopted. Las C. has on this account been represented as the author of the slave-trade, though it has been proved to have existed long before this proposal was made. Las C. afterward attempted to carry out Castilian peasants as colonists to the W. Indies, with the view of giving more complete effect to his schemes on behalf of the Indians; but failing in this, he retired to a Dominican convent in Hispaniola. He again visited Spain 1539, in behalf of the natives of the W. Indies, and published *Brevissima Relacion de la Destruccion de las Indias*, soon translated into the other languages of Europe. The rich bishopric of Cuzco was offered to him, but he preferred the poor one of Chiapa, in a wild and almost unexplored region. The colonists received him with no friendly feelings, and as he went the length of refusing the sacraments to those who disregarded the new laws in favor of the Indians, he drew on himself not only the resentment of the planters, but the disapprobation of the church, so that he was compelled to return to Spain, where he ended his life in a convent in Madrid, at the age of 92. His most important work, published after his death, is *Historio general de las Indias*. See his *Life* by Sir A. Helps (1868).

LAS CASES—LAS PALMAS.

LAS CASES, *lās kâz*, EMMANUEL AUGUSTE DIEUDONNÉ, Count: 1776–1842, May 15; b. near Revel: companion and historiographer of Napoleon in St. Helena. He was a lieut. in the French navy before the Revolution, and then fled from France, served in the Prince of Condé's army, spent some time in England, where he supported himself by private teaching, and took part in the expedition to Quiberon. After Napoleon's accession, he returned to France, and labored in the preparation of his admirable *Atlas historique* (1803–4). This work attracted the attention of Napoleon, who made him a baron, and employed him in the administration. After the battle of Waterloo, he offered to share the exile of Napoleon; and in St. Helena, the ex-emperor dictated to him a part of his Memoirs. A letter which L. contrived to send to Lucien Bonaparte, led to his separation from Napoleon; and after eight months' confinement at the Cape of Good Hope, he was brought to Europe, and resided mostly in Belgium till Napoleon died, when he returned to France, and published *Mémorial de Ste-Hélène* (8 vols. Par. 1823; amended edition, 1724, often reprinted), a work which must be always a chief source of information respecting Napoleon, but in which the author has taken too much liberty with his materials.

LASCIVIOUS, a. *lās-siv'ī-ūs* [L. *lasciv'ia*, wantonness; *lascivus*, wanton: It. *lascivo*: F. *lascif*]: lewd; wanton; lustful. **LASCIVIOUSLY**, ad. -*lī*. **LASCIVIOUSNESS**, n. -*nēs*, the state or quality of being wanton or lustful.

LASH, v. *lāsh* [Ger. *lasche*, a slap, a flap: a wōrd imitative of the sound; Esthon. *laksuma*, to sound like waves when they lash the shore: comp. Gael. *lasag*, a fit of anger]: to strike with a sounding blow, as when a whale lashes the sea with its tail, or a lion its flanks; to strike with a whip or scourge; to dash against with sudden jerks; to dash or beat against, as waves; to chase; to excite to great wrath; to censure with severity: N. a stroke, as with a whip; an expression or retort which gives pain; the thong or flexible part of a whip. **LASH'ING**, imp.: N. a whipping or chastisement. **LASHED**, pp. *lāsht*. **LASH'ER** n. -*ēr*, one who lashes. **TO LASH OUT**, to be extravagant or unruly.

LASH, v. *lāsh* [Dut. *lasch*, a piece let into a garment, a joint or seam; *lasschen*, to join two pieces together: Dan. *laske*, to baste, to stitch, to mortise]: to bind or fasten anything to the ship's sides or mast; to secure or bind with a rope or cord to something else. **LASH'ING**, imp.: N. the piece of rope or cord for binding one thing to another. **LASHED**, pp. *lāsht*, made fast by a rope. *Note.*—This and the preceding entry are intimately connected.

LAS PALMAS, *lās pāl'mās*: chief town of the Canary Islands (q.v.), on the e. coast of the island of Gran Canaria. * It is the seat of a bishop and of the supreme court. Pop. 17,661.

LASS—LASSALLE.

LASS, n. *lās* [*laddess*, the old fem. of *lad*: W. *lloes*, a lass]: a young woman; a girl; generally a country girl. LASSIE, n. *lās'ī*, in *Scot.*, a little lass. LASS'LORN, in *OE.*, forsaken by a sweetheart or mistress.

LAS'SA: see H'LASA.

LASSALLE, *lās-sāl'*, FERDINAND: originator of the movement for social-democracy in Germany: 1825–1864; b. Breslau; of Jewish lineage. In the universities of Breslau, and then of Berlin, he studied especially philosophy and philology, became a fervent Hegelian and a professed political reformer. He went to Paris, where he won the admiring friendship of Heine, whom he fascinated, as also von Humboldt, with his brilliant and audacious energy. There, 1845, he met Countess Hatzfeldt, whose cause he espoused against her husband long separated from her; and having studied law for the purpose, brought her case before 36 tribunals, and at the end of ten years secured for her a favorable settlement. The scandal which arose from his relations with her was increased by a theft of a bond of large value which Count Hatzfeldt had given to a baroness, his mistress, to the injury, as L. claimed, of his wife's rights. Men sent by L. carried off the bond with the baroness's jewels, in her jewel-casket. He was tried for complicity, but escaped conviction. In 1849 he was imprisoned for a year for resistance to the authorities at Düsseldorf. In 1862, his important political activity began, when into Bismarck's struggle with the liberals, L. brought a third factor, the cause of the working-men, in whose behalf he advocated a social revolution. The working-men were slow to comprehend his social theories: this only redoubled his activity as their self-appointed champion, in Berlin, Leipzig, Frankfort, and the whole Rhine country, where, 1863,4, his tours as the herald of a new day were like processions of a conqueror. Meanwhile, this agitator of society in the interests of the poor, was accustomed to live in most dainty and elegant luxury. Self-gratification was as a necessity to him. His resolve to marry a young lady of high social position, whose father sternly refused to allow her to have anything to do with him, occasioned his challenging to a duel a Bavarian count to whom her father had succeeded in bringing her to betroth herself. In this duel, in a suburb of Geneva, 1864, Aug. 28, L. fell mortally wounded. It was a fool's end; yet multitudes exalted him as a martyr, and for many years treasured his name in a fanatical devotion.

L. was a typical theorizer—not a broad and systematic thinker, but an invincible follower of a single superficial idea. Against the ancient feudal subjection of the working-people, and equally against the modern sway of capital in the hands of the middle classes who doled out wages to the laborers and kept them poor, he set the notion of a voluntary productive association of working-

LASSEN—LASSO.

men to be endowed with money provided by the state. Only this, he claimed, could deliver the laboring masses from the despotism of capital in the hands of individuals, who combined their forces for their own interests against those to whom they paid wages. The state was to supply the capital needed, and the workers were to administer it for productive results, and procure returns therefrom which should take the place of wages. Direct universal suffrage was the necessary preliminary to establishing the new order; and this was to be gained by peaceful but resolute organized agitation. His condemnation of the wage-system—it has been pointed out—was strictly based on Ricardo's well-known principle as to the operation of the law of wages under the relations of supply and demand: thus he made the orthodox political economy the justification of his theory.—L. had boundless ambition, and vast powers of leading and organizing men. His self-love vitiated his whole activity.—See Laveleye, *Le Socialisme Contemporain* (Paris 1881).

LASSEN, *lās'sēn*, CHRISTIAN: 1800, Oct. 22—1876, May 8; b. Bergen, Norway: eminent orientalist. He studied at Christiania, Heidelberg, and Bonn. He assisted Schlegel in publication of the *Rāmāyana* and *Hitopadesa*. He also associated himself with Eugène Bur-nouf in the *Essai sur le Pali* (Par. 1826). In 1830, he became extraordinary prof., and 1840, ordinary prof. of ancient Indian languages and literature, at Bonn. He edited many Sanskrit works, deeply investigated the relations of the oriental languages and antiquities, and published several very important books. Among them are works on Persian Cuneiforms (1836 and 45); on the Greek Kings in Bactria (1838); *Institutiones Linguae Pracriticæ* (1837); *Indische Alterthumskunde*, critical history of Indian civilization (Bonn 1847-61; new ed., 1861-74), etc. He died at Bonn, after a total blindness of several years.

LASSEN'S PEAK: one of the highest summits of the Sierra Nevada Mountains, on the boundary lines of Shasta, Tehama, and Plumas cos., Cal.; lat. 40° 28' n.; 10,577 ft. above the sea. It is of volcanic origin, is partly composed of lava and trachyte, yields enormous growths of pine and fir on its slopes, and nut pine, oak, and manzanita at its base, and is snow-topped the year round.

LASSITUDE, n. *lās'sī-tūd* [*F. lassitude*—from *L. lassitudo*, faintness, weariness—from *lassus*, faint, languid: *It. lassitudine*]: fatigue; weariness; languor of body or mind proceeding from exhaustion or a distempered state.

LASSO, n. *lās'sō* [*Sp. lazo*, a slip-knot: *F. laisse*; *It. lassa*, a leash for dogs]: thin but well-plaited rope of raw hide, used in Spanish America for catching wild cattle. One end is fastened to the saddle gear of the man who uses it, the other ends in a small

LAST—LAST TESTAMENT.

brass ring, by means of which a running noose, usually 8 ft. wide, is formed. The rider holds a coil of the L. in the left hand; with the right, he dexterously whirls the open noose round his head, and hurls it (to no great distance, but with wonderfully sure aim), so as to fall over a given object—round the horns of a wild ox, or the like. The *bolas* is a shorter cord with leaden balls at both ends; sometimes it has three branches. Held by one ball, it is whirled round the head of the rider till it has attained sufficient momentum, and then the entire missile is sent spinning through the air like chain shot, so as to twist round the legs of the animal pursued. In Mexico the L. is *la reata* (the rope); thence the term *lariat* for a kind of L. in the s.w. territories of the United States. The L. has been used in warfare with deadly effect. Only very skilful riders can use it. **LASSO**, v. to capture with a lasso. **LAS'SOING**, imp. **LAS'SOED**, pp. -sôd.

LAST, a. *lâst* [contracted from *latest*: Ger. *letzt*; Bav. *lesst*; Low Ger. *lest*, *last*]: that comes after all the others in time, place, or order; utmost; final; next before the present. **LAST'LY**, ad. -*lî*, in the last place; in conclusion. **AT LAST**, or **AT THE LAST**, at the end; in the conclusion. **TO THE LAST**, to the end. **TO BREATHE ONE'S LAST**, to die; to expire.

LAST, n. *lâst* [Icel. *hlass*, a cart-load; *lest*, a burden: AS. *hlæst*; Dut. and Ger. *last*, a load]: a burden; a certain weight or measure of variable amount. **LASTAGE**, n. *lâst'âj*, the lading of a ship; ballast; storage room; a duty levied at some markets or fairs.

LAST, n. *lâst* [Dut. *leest*, to make, to shape: Ger. *leisten*, a model, a mold, a shoemaker's mold: Icel. *leistr*, the foot below the ankle]: the form or model of the foot, usually of wood, on which boots and shoes are made. **LAST'ING**, n. the process of drawing the upper leather smooth and straight in shoemaking; a worsted stuff used for uppers. **TO STICK TO ONE'S LAST**, to abide by one's own proper business; not to pass an opinion on a matter of which one knows little or nothing.

LAST, v. *lâst* [Ger. *leisten*, to fulfil, to carry out: Goth. *laist*; AS. *last*, a trace, a footstep]: to perform the duty for which a thing is made; to wear; to continue; to remain; to hold out, as the provisions will last a week; to endure. **LAST'ING**, imp.: **ADJ.** durable; of long continuance. **LAST'ED**, pp. **LAST'INGLY**, ad. -*lî*. **LAST'INGNESS**, n. -*nês*, the quality or state of long continuance. —**SYN.** of 'lasting': enduring; continuing; remaining; permanent; perpetual; undecaying; unending.

LAST HEIR, in Scotch Law: the sovereign, who takes the property of persons deceased leaving no legal heir: see **INTESTACY**.

LAST TESTAMENT, or **LAST WILL**: the latest instrument in point of date, and it revokes prior wills so far as inconsistent: see **WILL**.

LATAKIA—LATENT.

LATAKIA, n. *lāl'a-kē'a*: a superior kind of Turkish tobacco, so called from the place where produced.

LATAKIA, *lā-ta-kē'a* (Turkish, *Ladakkiyeh*; anc. *Laodicea*): s. seaport of Syria, pashalic of Tripoli, 75 m. n. of the town of Tripoli, 60 m. s.w. of Antioch. It is surrounded by plantations of myrtle, pomegranate, mulberry, and olive trees. It consists of the decaying Upper Town and the Lower Town, separated by magnificent gardens. On the hills in the vicinity, a mild and finely-flavored tobacco is grown, and is extensively exported. L. occupies the site of the ancient *Laodicea ad Mare*, which was founded by Seleucus Nicator, and named after his mother, and which formed the port of Antioch. The ruins of the aqueduct built here by Herod the Great are extant.—Pop. 7,000 to 10,000.

LATCH, n. *läch* [AS. *læccan*, to catch, to seize: F. *loquet*, the latch of a door: L. *laquëus*; F. *lacs*, a bow-string, a noose]: a small bar of iron or wood moving on a pivot, used for fastening a door, and raised by a handle or string; in *OE.*, a cross-bow, from the resemblance of the trigger to the fastening of a door: V. to fasten with a latch; in *OE.*, to catch; to inclose. **LATCH'ING**, imp. **LATCHED**, pp. *läch't*. **LATCH-KEY**, a key used to raise the latch of a door. **LATCHET**, n. *läch'ët*, the buckle or string of a shoe. *Note*.—**LATCHET** is really a dim. of *lace*, and is not derived from *latch*; the first *t* is intrusive.

LATE, a. *lät* [Icel. *latr*; AS. *læt*, slow: Dut. *laat*, tardy: Ger. *lass*; L. *lassus*, weary]: coming after the usual time; tardy; long-delayed; deceased; departed; recent, as the *late* gales; far in the day or night: AD. after or beyond the usual time; in time not long past; for lately. **LATE'LY**, ad. *-lī*, not long ago. **LATE'NESS**, n. state of being late or tardy; time far advanced; comparatively recent time. OF **LATE**, in times past; near the present. **TOO LATE**, after the proper time. **LA'TER**, a. *-tēr*, comparative degree of *late*; longer delayed; subsequent. **LA'TEST**, a. superl. degree of *late*; final; ultimate.

LATEEN, a. *lā-tēn'* [It. *latina*, as in *vela latina*, a Latin or lateen sail; *latino*, broad, wide]: broad and triangular—applied to a sail, as a *lateen sail*, i.e., a large triangular sail, common in the Mediterranean. The upper edge is fastened to the lateen-yard, a spar of considerable length, which is held at about an angle of 45° with the deck, by means of a mast crossing it at a third or a fourth of the way up.

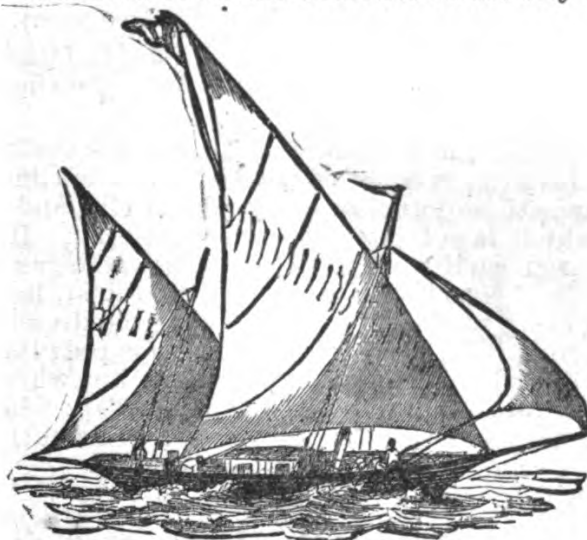
LATENT, a. *lā'tēnt* [F. *latent*—from L. *latens* or *laten'tem*, concealing, hiding: It. *latente*]: concealed; hid; not visible or apparent. **LATENCY**, n. *lā'tēn-sī*, the state of being latent or concealed. **LA'TENTLY**, ad. *-lī*. **LATENT FAULT**, in *law*, defects in an article sold which were unknown to the seller. In the contract of sale, it is a rule that the buyer takes the risk of all latent faults, all that the seller answers for being, that the thing is, so

LATERAL—LATERAN.

far as he knows, what it appears to be. **LATENT HEAT**, heat which when applied to a body produces no rise of temperature, but only a change of state, as ice when changed into water: see **HEAT**.—**SYN.** of 'latent': hidden; secret; occult; unseen; invisible; obscure; abstruse.

LATERAL, a. *lăt'ér-əl* [F. *latéral*—from L. *laterālis*, of or belonging to the side—from *lātus*, a side: It. *laterale*]: pertaining to or proceeding from the side, or inclined to it; on, in, or of the side. **LATERALLY**, ad. -*ly*, in the direction of the side; by the side.

LATERAN, n. *lăt'ér-ăn* [named from the anc. *Laterāni* family, whose mansion stood on the site]: abbreviated title of the **CHURCH OF ST. JOHN LATERAN**, the first in dignity of the churches at Rome, with a palace and other buildings annexed; styled in Roman usage 'the Mother and Head of all the churches of the city and the



Lateen-Sail.

world.' It occupies the site of the splendid palace of Plantius Lateranus, which, having been escheated (A.D. 66), in consequence of Lateranus being implicated in the conspiracy of the Pisos, became imperial property, and was assigned for Christian uses by Emperor Constantine. The church was originally dedicated to the Savior; but Lucius II., who rebuilt it in the middle of the 12th c., dedicated it to St. John the Baptist. The solemn entrance of the pope into office is inaugurated by his taking possession of this church; and over its portico is the balcony from which the pope, while sovereign of Rome, was used, on certain festivals, to bless the entire world. The original church is said to have been the Basilica presented to Sylvester by Constantine, but it has been several times rebuilt, its final completion dating from the pontificate of Clement XII. (pope 1730-40). It has been the scene of five councils, regarded as ecumenical

LATERAN—LATEX.

by the Roman Church: see **LATERAN, COUNCILS OF: COUNCIL.** The Lateran Palace was the habitual residence of the popes until after the return from Avignon, when they removed to the Vatican. It was afterward occupied by officials of the chapter, and is now under the control of the Italian govt. The late pope, Pius IX., had converted a portion of it into a museum of Christian archeology. In the piazza of St. John Lateran stands the celebrated relic called the 'Scala Santa,' or 'Holy Staircase,' reputed to be the stairs of Pilate's house at Jerusalem, made holy by the feet of our Lord as he passed to judgment.

LATERAN, COUNCILS OF: numerous councils at Rome, in the Church of St. John Lateran. For four of the most important, see **COUNCIL.**—A Lateran synod, called by Pope Martin I., 649, comprising more than 100 bishops of Italy, Sicily, Sardinia, and Africa, considered and condemned the doctrine of the Monothelites (q.v.).

LATERIFOLIOUS, a. *lăt'ér-î-fō'li-ūs* [L. *lātus*, a side, *latēra*, sides; *foliūm*, a leaf]: in *bot.*, growing on the side of a leaf at the base.

LATERITE, n. *lăt'ér-īt* [L. *lāter*, a brick or tile]: mineral substance, product of the disintegration and partial decomposition of gneiss; compound of clay and oxide of iron, which is cut into bricks for building. It forms a bright red earth; which, where it abounds, as in parts of Ceylon, being blown about as a fine dust, imparts its hue to every neglected article, and to the dresses of the inhabitants. L., however, is not always red: its redness is attributed to the presence of iron; but when felspar preponderates in the gneiss, it is whitish: when hornblende preponderates, it is yellow. **LATERITIOUS**, a. *lăt'ér-īsh'ūs*, of the color of bricks.

LATER, LATEST: see under **LATE.**

LATES, *lăt'ēz* (*Lates Niloticus*): fish of the perch family, one of the most delicate and best-flavored fishes of the Nile. It grows to a large size, sometimes 3 ft. long. It is mentioned by several ancient authors. In form it resembles a perch, and the genus is very nearly allied.—Another species of this genus is the **VACTI** (*Lates nobilis*), called *Cock-up* by the English in Calcutta, one of the most esteemed fishes of the Ganges, which it ascends as far as the tide does.

LATEX, n. *lăt'tēks* [L. *lātex* or *lătīcem*, a liquid or juice]: in *bot.*, the proper juice or returning sap of plants after it has been elaborated in the leaves. It returns from the leaves to the bark by vessels called *laticiferous vessels*, which branch, unite, and anastomose very variously. They are not always of uniform thickness, but present many distentions, often almost as if articulated. Peculiar currents are observed in the *Latex*, pointed out first by Schultz, who has bestowed great attention on this subject, and its connected physiology.

LATH—LATHE.

The L. differs very much in different plants, in color and other qualities, but in all it is full of granules. LATICIFEROUS, a. *lăt'î-sîf'ér-üs* [L. *fero*, I carry]: containing latex or elaborated sap.

LATH, n. *lăth*, LATHS, n. plu. *lăthz* [F. and Dut. *latte*, a thin piece of cleft wood: Ger. *latte*, a pole or rod, a young slender tree: W. *llath*, a yard or measure of three feet]: long thin slips of wood, of various lengths, rarely more than four ft.; made by splitting lathwood, or sawn from deal; used in lining ceilings, partitions, and walls of houses before the plaster is laid on; they are placed slightly apart to receive the plaster, which is pressed into the intervals. The sawn laths are a modern introduction, due to the development of steam saw-mills in the northern states and in Canada, which thus utilize the small portions of the lumber. Slaters' laths are longer strips of wood, nailed on to the framework of a roof, for sustaining the slates, which are fastened to the laths by nails. LATH, v. to cover or line with long thin slips of wood. LATH'ING, imp. n. a covering made of laths. LATHED, pp. *lătht*: ADJ. covered or lined with laths. LATH'ER, n. one employed in lathing. LATHY, a. *lăth'î*, thin or slender as a lath. LATHWOOD, Norway spruce fir (*Pinus abies*), from which laths were almost altogether made: now deal is much used for lathwood.

LATHAM, *lă'tham*, ROBERT GORDON, M.D.: English philologist and ethnologist: b. 1812, Billingborough, Lincolnshire. He was educated at Cambridge, and took the degree M.D.; but making a tour in Denmark and Norway, turned his attention to the Scandinavian languages. For several years he was prof. of English language and literature in Univ. College, London. His well-known work, *English Language* (1841) has gone through numerous editions. *Natural History of the Varieties of Mankind* (Lond. 1850) is a valuable contribution to ethnology. Among his works are his edition of Tacitus's *Germania*, with philological and historical notes (1850); *Ethnology of the British Colonies*; *Man and his Migrations* (Lond. 1851); *Descriptive Ethnology* (1859); *The Nationalities of Europe* (1863); new ed. of Johnson's *Dictionary* (1870); *Outlines of General or Developmental Philology* (1878).

LATHE, n. *lăth* [OE. *lare*, a lathe: Icel. *loth*, a smith's lathe: Ger. *laede*, a frame: probably from *lath*]: a machine used for turning wood, iron, etc., or for drilling and burnishing: see TURNING.

LATHE, or LATH, n. *lăth* [AS. *laeth*, a portion of land: Dan. *laegd*, a division of land, a site]: in OE., a division of a county; an intermediate division between a shire and a hundred; still in use to denote a number of hundreds amounting to less than a shire. In Irish usage L. denotes a division intermediate between a tithing and a hundred.

LATHER—LATHYRUS.

LATHER, n. *lăth'ēr* [prov. Eng. *lother*, to splash in water: Icel. *lodra*, to foam; *loðr*, foam of the sea: Bav. *loder*, suds]: the foam or froth formed by rubbing soap moistened with water, used for shaving: V. to cover with soap-foam; to become frothy; to form a foam. **LATH'ERING**, imp. **LATH'ERED**, pp. -*ērd*.

LATHROP, *lă'throp*, **GEORGE PARSONS**: author: b. Honolulu, Hawaii, 1851, Aug. 25. He was educated in New York and Dresden, Germany; attended Columbia College law school one term; married Rose, second daughter of Nathaniel Hawthorne 1871; was asst. editor of the *Atlantic Monthly* 1875-77, and editor of the *Boston Courier* 1877-79; removed to New York 1883; and founded the American Copyright League. He edited an edition of Hawthorne's works (Boston 1883), made a dramatic adaptation of Tennyson's *Elaine*, and published *Rose and Roof-tree*, poems (1875), *Study of Hawthorne*, and *Afterglow*, novel (1876), *An Echo of Passion* (1882), *In the Distance* (1882), *Spanish Vistas* (1883), *History of the Union League in Philadelphia* (1883), *Newport* (1884), and *True* (1884).

LATHYRUS, *lăth'ŭ-rŭs*: genus of plants of nat. ord. *Leguminosæ*, sub-ord. *Papilionacæ*. The leaves are furnished with tendrils, and are pinnate, but often with



Everlasting Pea. (*L. Tuberosus*):

a, creeping root, with tubers; *b*, pod, with calyx.

only one pair of leaflets. The species are numerous, annual and perennial herbaceous plants, natives of temperate countries in the n. hemisphere. Few are American. Some have very beautiful flowers of considerable

LATICIFEROUS—LATIMER.

size, and find a place in flower-gardens; e.g., *L. latifolius* and *L. sylvestris*, the latter a native of England, and the former of s. Europe, both perennials, and known by the name of EVERLASTING PEA. The SWEET PEA (*L. odoratus*), native of the East, well-known in flower-gardens, is a hardy annual, whose flowers are esteemed for both beauty and fragrance. Many varieties are in cultivation, differing in color, etc. The MEADOW VETCHLING (*L. pratensis*), has bright yellow flowers. *L. sativus*, the CHICKLING VETCH, or LENTIL OF SPAIN, native of s. Europe, with flowers generally of bright blue color and winged pods, is cultivated in India and in Germany, France, and other countries for its seeds, the flour of which, however, is mixed with other flour rather than used alone, on account of its narcotic qualities, which even caused its cultivation for food to be interdicted in Würtemberg 1671. An incurable paralysis of the limbs has sometimes been produced by it, both in human beings and lower animals. The seeds of *L. cicera*, though sometimes used by the country people of France, are even more dangerous. Those of *L. Aphaca*, species sometimes found on gravelly soils in England, possess similar qualities when ripe, but in unripe state are eaten with the pods which contain them, and are quite wholesome. *L. tuberosus*, native of Germany and other parts of continental Europe, is cultivated for its amylaceous tubers, sometimes called *Dutch Mice*, in Germany, known as *Earth-nuts*. The herbage of the plant is relished by cattle.

LATICIFEROUS: see LATEX.

LATIMER, *lăt'è-mér*, HUGH: one of the most distinguished of the English reformers, bishop of Worcester: prob. 1490–1555, Oct. 16; b. Thurcaston, Leicestershire. He was educated at Cambridge, and after a brief period of zealous devotion to the papacy ('I was as obstinate a papist,' he says, 'as any in England'), he became attached to the new learning and divinity which had begun to establish themselves there. He very soon became a zealous preacher of the reformed doctrines. The consequence of his new-born zeal was, that many of the adherents of the old faith were strongly excited against him, and he was embroiled in many controversies.

The dispute about Henry VIII.'s marriage with Catharine of Aragon brought L. more into notice. He was one of the divines appointed by the University of Cambridge to examine as to its lawfulness, and he declared on the king's side. This secured Henry's favor, and he was appointed one of his chaplains, and received a living in Wiltshire. In 1535, he was appointed Bp. of Worcester; and at the opening of convocation 1536, June 9, he preached two very powerful and impressive sermons, urging the necessity of reform. After a while, the work of reform rather retrograded than advanced, and L.

LATIMER.

found himself with his bold opinions in little favor at court. He retired to his diocese, and labored there in a continual round of 'teaching, preaching, exhorting, writing, correcting, and reforming, either as his ability would serve, or the time would bear.' This was his true function. He was an eminently practical reformer. In the closing period of Henry's reign, and when the reactionary party headed by Gardiner and Bonner were in the ascendant, L. lived in great privacy. He was looked on with jealousy, and closely watched, and finally, coming up to London for medical advice, he was brought before the privy council and cast into the Tower.

On the accession of Edward VI., he again appeared in public. He declined, however, to resume his episcopal functions, though his old bishopric was offered to him at the instance of the house of commons. He devoted himself to preaching and practical works of benevolence. The pulpit was his great power, and by his stirring and homely sermons, he did much to rouse a spirit of religious earnestness throughout the country. At length, with the lamented death of Edward, and the accession of Mary, he and other reformers were arrested in their career of activity. L. was put in prison, and examined at Oxford 1554. After his examination, he was transferred to the common jail there, where he lay for more than a year, feeble, sickly, and worn out with his hardships. Death would not have long spared the old man, but his enemies would not wait for the natural termination of his life. In 1555, Sep., he was summoned before certain commissioners, appointed to sit in judgment upon him and Ridley; and after an ignominious trial, he was condemned to be burned. He suffered with Ridley 'without Bocardo Gate,' opposite Baliol College, exclaiming to his companion: 'Be of good comfort, Master Ridley, and play the man: we shall this day light such a candle, by God's grace, in England, as I trust shall never be put out.'

L.'s character presents a combination of many noble and disinterested qualities. He was brave, honest, devoted, and energetic, homely and popular, yet free from all violence; a martyr and hero, yet a plain, simple-hearted, and unpretending man. Indeed, at one critical hour he seems to have had in charge the fortunes of the Reformation in England. His sermons were unique, and had immense popular influence. It has been said that L. by his preaching did more for the Reformation than Henry VIII. by his edicts. Humor and cheerfulness, manly sense and direct evangelical fervor, distinguish his sermons and his life, and make them alike interesting and admirable.

L.'s sermons were reprinted at London, 2 vols., 1825. The latest ed. is by the Rev. G. Corrie, 4 vols. 1845.—See Tulloch's *Leaders of the Reformation* (1859); and *Latimer*, biography by Demaus (1869).

LATIN—LATINI.

LATIN, n. *lăt'in* [*Latīnus*, of or belonging to Latium, Latin—from *Latīūm*, the district of anc. Italy where Rome was situated]: the language of the anc. Romans: **ADJ.** pertaining to Rome and its language; composed in the language of the anc. Romans (see **LATIN LANGUAGE AND LITERATURE**). **LAT'INISM**, n. *-izm*, a mode of speech peculiar to the Latins. **LAT'INIST**, n. *-ist*, one learned in Latin. **LATINITY**, n. *lăt'in'i-ti*, the Latin style or idiom. **LATINIZE**, v. *lăt'in-iz*, to give to foreign words Latin terminations. **LAT'INI'ZING**, imp. **LAT'INIZED**, pp. *-izd*. **LATIN CHURCH**, the Church of Rome and the churches which hold to the Romans' obedience, and conduct service in the Latin language, as distinguished from the *Greek* or *Eastern Church*. The disruption of the church into these two sections, occurred in the 9th c. **LATIN CROSS**, cross having its lower limb considerably longer than the other three limbs. **LATIN EMPIRE**, name given to that portion of the Byzantine empire seized 1204 by the Crusaders, who made Constantinople their capital: it was overthrown by the Greeks 1261 (see **BYZANTINE EMPIRE**). **LATIN RACE**, the nations of western Europe, whose languages are closely allied to the Latin, as the Italians and French. **DOG LATIN**, Latin composed with some degree of literal and grammatical accuracy, but neither elegant nor idiomatic. **LAW LATIN**, a corrupt Latin largely interspersed with Latinized foreign words and non-classical words and phrases, used in law courts and in the preparation of deeds and instruments, now employed to a very limited extent, unless in the use of particular words and phrases. **LOW or MIDDLE LATIN**, the Latin in common use in the non-classical and middle ages. **MONKISH LATIN**, the mixed and debased Latin as used in the monasteries, and by ecclesiastical writers of the middle ages.

LATINI, *lā-tī'nī*: Italian people, who in pre-historic times had established themselves on the lower part of the Tiber and the Anio, between the sea and the nearest Apennines. The limits of their territory, **LATIUM** (q.v.), cannot, however, be fixed with precision. The L. had the Volsci for neighbors on the s., the Æqui and Hernici on the e., and the Sabines on the n.; but after the subjugation of these tribes by the Romans, the name of Latium was given to the whole conquered district. The original and strictly ethnological Latium is called by Pliny, *Latium Antiquum*, and the newer and added portions, *Latium Adjectum*. The legend which forms the subject of the *Æneid*, the great national epic of the Romans, and which describes the introduction of a third or *Trojan* element in the persons of Æneas and his companions, possesses no historical value. The principal towns of the Latins were Laurentum, Lavinium, Alba Longa (q.v.), from which, according to the legend, went forth the founders of Rome, Ostia, Antium, Tusculum, Præneste, and Tibur.

LATIN LANGUAGE.

LATIN LANGUAGE AND LITERATURE: language and written productions of the ancient Romans. — *Language.*—The Latin is a member of the great family commonly called Indo-Germanic, Indo-European, or Aryan. It is therefore closely allied to the Greek, Persian, German, Celtic, English, and many other tongues and dialects of Europe, its kinship to which is more or less clearly shown by identity of stems and similarity of structure. It was developed primarily among the people who inhabited the plain of Latium, in that part of w. Italy between the rivers Tiber and Liris (see LATIUM); and though the city of Rome stamped her name on the political institutions of the empire, yet the standard tongue of Italy still continued to be called the *Latin* language, *not* the Roman. As the Roman conquests extended, Latin spread with equal strides over the conquered countries, and was generally used by the educated classes in the greater part of Italy, in France, Spain, Portugal, Germany, and other Roman provinces. But even in Italy itself, and in Latium, there seem to have been two forms of the language, differing considerably from each other—a polished dialect and a rustic one—a language of books and of the higher classes, and a language of conversation and everyday life among the vulgar. It was in the last years of the Republic and the first of the Empire that the polished language reached its highest perfection in the writings of Cicero, Horace, Virgil, and others. But by the influx of strangers, by the gradual decline of Roman feelings and Roman spirit, and by the intermixture of the classic forms with the dialects of the provinces, it became corrupted, the process of deterioration going on with double rapidity after the dismemberment of the Roman Empire in the 5th c. Thus were formed the modern French, Spanish, Italian, and Portuguese. The English language also owes much to Latin, both directly by derivation from the classical forms, and at second-hand through the Norman-French. Latin continued the diplomatic language of Europe till a comparatively recent period. It is still the medium of communication among the learned of the world, and has always been the official language of the Rom. Cath. Church. See the grammars of Madvig, Kennedy, and Roby in English; and works by Hübner, Dägger, Corssen, Neue, and other German scholars.

The grammar of the Latin language has been studied and illustrated by many celebrated scholars from Varro (B.C. 116–28) to Zumpt, Grotefend, Kuhner, and Madvig, through a long list of names, such as Donatus, Priscian, Laurentius Valla, Manutius, Melanchthon, Scaliger, Perizonius, Schneider, Linacre, Ruddiman, Alvarez, and many more. In lexicography, Perotti, Stephanus, Faber, Gesner, Forcellini, Scheller, Freund, Georges, and others of less note, have done valuable service.

Literature.—The Roman Republic had nearly run its course ere it possessed a writer of literature worthy of

LATIN LANGUAGE.

the name. A kind of rude poetry was cultivated from earliest times, and was employed in such compositions as the Hymn of the Fratres Arvales (dug up at Rome 1778, and in the first enthusiasm excited by its discovery, assigned to the age of Romulus), in the sacred songs to particular deities, and in triumphal poems and ballads, in the Fescennine Carols, and other rude attempts to amuse or dupe an illiterate and vulgar populace. And even when, in after years, the Romans began to foster a literary taste, the rage for Greek models hindered every effort at original thought. It was considered highly meritorious to imitate or translate a Greek writer, dishonorable to follow a Latin author. Such was the feeling even in the days of Horace and Virgil, both of whom are largely indebted to their Greek models. The first period of Roman literature may be said to extend from B.C. 240 to the death of Sulla B.C. 78; the second, or Golden Age, from the death of Sulla to the death of the Emperor Augustus A.D. 14; the third, or Silver Age, from the death of Augustus to the death of Adrian A.D. 138; and the fourth from the death of Adrian to the overthrow of the Western Empire A.D. 476. In the first period, the most distinguished names are those of Livius Andronicus, writer of dramas adapted from the Greek, whose first play was brought out B.C. 240; Ennius, whose chief work was an epic poem on the History of Rome, and who wrote also dramas and satires; with Nævius, Plautus, and Terence, the comedians. The second period is adorned by Varro, who wrote on agriculture, grammar, antiquities, etc.; by Lucretius, writer of the didactic epic; by Virgil, who, to his great epic, the *Æneid*, added pastoral and agricultural poetry in the *Eclogues* and *Georgics*; by Horace, in lyric verse and in satire; by Catullus, in lyric; by Tibullus and Propertius, in elegy; by Livy Cæsar, Sallust, and Nepos, in history and biography; by Cicero, in philosophy, rhetoric, and oratory; and by Ovid, in elegiac and didactic poetry. The third period presents Tacitus, historian and biographer; the elder Pliny, naturalist; Persius and Juvenal, satirists; Martial, epigrammatist; Columella and Lucan, didactic and epic poets; Statius, Silius Italicus, and the younger Pliny, with many of less note. The fourth period produced few men of name; but among the best known are Emperor M. Aurelius, Ammianus Marcellinus, Gellius, Justin, Appuleius, Lactantius, Eutropius, Macrobius, Calpurnius, Boëthius, Paullinus, and Claudianus, the last of the Roman classic poets.—For minor varieties of the language, see LAW LATIN: DOG LATIN: LOW or MIDDLE LATIN: MONKISH LATIN (under LATIN).

The spread of Christianity gave rise to the ecclesiastical poetry of the middle ages, which departed from the classic models, and struck out for itself a new type. It disregarded the restrictions of quantity and metre, and substituted accent and rhyme as the regulating princi-

LATIN UNION—LATISEPTÆ.

ples of its form. The most famous name in the earlier period is that of Prudentius—to whom we may add Sedulius, St. Hilary, St. Ambrose, and St. Gregory the Great; and in the later period, Fortunatus; Emperor Charlemagne, author of *Veni Creator*; Bede (the Venerable); Bernard de Morley; Adam of St. Victor; Thomas of Celano, author of the famous *Dies Iræ*; James de Benedictis, author of the equally famous *Stabat Mater*; and St. Thomas Aquinas.—See histories of Latin Literature by Bernhardt, Munk, Teuffel, and Simcox (1883).

LATIN UNION: association of European states, formed at Paris, 1865, Dec. 23, by which it was agreed to regulate the weight, title, form, and circulation of the gold and silver coinage of those states. The original members of the union were France, Belgium, Switzerland, and Italy. Greece and Roumania joined it 1867, Apr. The agreement, which went into effect 1866, Aug. 1, was that no gold or silver was to be coined other than in certain specified pieces, of a fixed weight, standard, tolerance, and diameter, with the year of issue stamped on them; and that the members of the union must make an annual statement of the quantity of gold and silver coins issued by each, and the amount collected for melting. The issue of coins of the smaller denominations was limited in each state, so as not to exceed in amount six francs for each inhabitant. At the annual conference 1874, Jan. 30, it was further agreed to limit the issue of five franc pieces for that year to a certain number in each state; which agreement was renewed the following two years. In 1877 the coinage of five franc pieces was entirely suspended, except for Italy. In 1873 Belgium received power to suspend silver coinage altogether; in 1876 France did the same; Switzerland also has it. At a conference, Paris 1878, all limitations on gold coinage were removed, except that the coinage of gold five franc pieces was suspended, also that of silver five franc pieces, provisionally, which, however, 'may be resumed when a unanimous agreement to that effect shall be established.' In 1875 Holland, a member of the union, suspended the right of private individuals to have silver coined at her mint.

In view of these facts, and since France holds within her borders more than 2,500,000,000 francs in silver coin, it is easy to see that she has directed the legislation of the union with great skill so as to prevent any large decline in its value. In spite of attempts in the legislation of other nations to demonetize it, she has succeeded not only in saving her own capital in silver without loss of value in its home circulation, but in acquiring it at reduced cost from her neighbors.

LATISEPTÆ, n. plu. *lăt'i-sěp'tē* [L. *lātus*, broad; *septum*, a hedge]: in bot., cruciferous plants having the dissepiment of the pod broad in proportion to the thickness between the valves.

LATITAT—LATITUDE.

LATITAT, *lā'ti-tāt*: old form of writ in England, which commenced an action in the court of queen's bench; now obsolete.

LATITUDE, n. *lāt'i-tūd* [F. *latitude*—from L. *latitūdīnem*, breadth—from *lātus*, broad: It. *latitudine*]: on the earth, the distance of any place in a direct line north or south from the equator, measured in degrees, minutes, and seconds—if in the northern hemisphere, it is said to be in *north latitude*, if in the southern, *south latitude* (see **LATITUDE** and **LONGITUDE**): undefined freedom with respect to meaning of words and principles of action; laxity. **LAT'ITU'DINAL**, a. *-tū'dī-nāl*, pertaining to latitude. **LAT'ITU'DINA'RIAN**, a. *-dī-nā'rī-ān*, unrestrained; unconfined as to doctrines: N. one who indulges in unusual freedom, chiefly in religious opinions; one not strictly orthodox. **LAT'ITU'DINA'RIANISM**, n. *-rī-ān-izm*, freedom or laxity of opinions, usually applied to religious opinions (see **LATITUDINARIANS**). **LATITUDE OF A HEAVENLY BODY**, the distance of the body from the ecliptic or plane of the earth's orbit. **PARALLELS OF LATITUDE**, the circles drawn parallel to the equator on the terrestrial globe, or on a map of the world. **HIGH LATITUDES**, the parts of the earth's surface lying near or beyond the arctic circle in the northern, and the antarctic circle in the southern hemisphere. **LOW LATITUDES**, the parts of the earth's surface lying near the equator. **MIDDLE LATITUDES**, the parts of the earth's surface lying within the temperate zones. *Note*.—The terms *longitude* and *latitude* had their origin from the notion of the ancients, that the earth was *longer* from east to west (longitude) than from south to north (latitude)—these terms expressing *length* and *breadth*.

LATITUDE AND LON'GITUDE, in Geography: angular distances of a place on the earth (latitude) n. or s. from the equator, and (longitude) e. or w. from the first meridian, respectively; the angular distance in longitude being found by supposing a plane to pass through the place, the earth's centre, and the poles, and measuring the angle made by this plane with the plane of the first meridian; the angular distance in latitude being found in the same manner, but substituting the two extremities of an equatorial diameter for the poles; or, more simply, latitude is the angle made by two lines drawn from the earth's centre—the one to the place, the other to the equator at the point where it is crossed by the meridian of the place. Latitude is reckoned from the equator to the poles, a place on the equator having lat. 0°, and the poles 90° n. and 90° s. respectively. Longitude is reckoned along the equator from the first meridian; but as nature has not, as in the case of latitude, supplied a fixed starting-point, each nation has chosen its own first meridian; thus, in Great Britain and her colonies, in Holland, and other maritime states, longitude is reckoned from the meridian which passes

LATITUDE.

through Greenwich; in France, from that through Paris, etc.; and in many old charts, from Ferro (one of the Canary Isles), or from the Madeira Isles. It is reckoned e. and w. from 0° to 180° , though astronomers reckon from 0° w. to 360° w., and never use e. longitude. It is evident that if the latitude and longitude of a place be given, its exact position can be determined, for the latitude fixes its position to a circle passing round the earth at a uniform fixed distance from the equator (called a parallel of latitude), and the longitude shows what point of this circle is to be intersected by the meridian of the place, the place being at the intersection.

The determination both of latitude and of longitude depends on astronomical observation. The principle on which the usual methods of finding the latitude depend, appears from the following considerations: To an observer at the earth's equator, the celestial poles are in the horizon, and the meridian point of the equator is in the zenith. If now he travels northward over one degree of the meridian, the n. celestial pole will appear one degree above the horizon, while the meridian point of the equator will decline one degree southward; and so on, until, when he reached the terrestrial pole, the pole of the heavens would be in the zenith, and the equator in the horizon. The same thing is true with regard to the s. hemisphere. It thus appears that to determine the latitude of a place we have only to find the altitude of the pole, or the zenith distance of the meridian point of the equator (which is the same thing as the complement of its altitude). The altitude of the pole is found most directly by observing the greatest and least altitudes of the polar star (see POLE), or of any circumpolar star, and (correction being made for refraction) taking half the sum. Similarly, half the sum of the greatest and least meridian altitudes of the sun, at the two solstices, corrected for refraction and parallax, gives the altitude of the meridian point of the equator. The method usual with navigators and travellers is to observe the meridian altitude of a star whose declination or distance from the equator is known; or of the sun, whose declination at the time may be found from the *Nautical Almanac*; the sum or difference (according to the direction of the declination) of the altitude and declination gives the meridian altitude of the equator, which is the co-latitude. Other methods of finding the latitude require more or less trigonometrical calculation.

The determination of the longitude is much less readily accomplished. Various methods have been proposed, most of which are fitted only for observatories. Among these may be classed those which depend on the determination of the local time of the occurrence of certain celestial phenomena, such as the eclipses of the sun, moon, or Jupiter's satellites, occultations of fixed stars by the moon, the time occupied in the moon's transit over the meridian, etc., and comparing the ob-

LATITUDINARIANS.

served local time with the calculated time of the occurrence, at some station whose longitude is known (e.g., Greenwich), the difference of time when reduced to degrees, minutes, and seconds, at the rate of 360° to 24 hours, gives the difference of longitude. The two methods in use among travellers and on board ship are remarkable for their combination of simplicity with accuracy. The first consists merely in determining at what hour on the chronometer (which is set to the time at Greenwich, or some place of known longitude) the sun crosses the meridian. It is evident that as the sun completes a revolution, or 360° , in 24 hours, he will move over 15° in 1 hour, or 1° in 4 minutes. Now, if the watch be set to Greenwich time—viz., point to 12 o'clock when the sun is on the meridian of Greenwich, and if at some other place, when the sun is on the meridian there, the watch points to 3 hours 52 minutes, the difference of longitude is 58° , and the longitude will be w., as the sun has arrived over the place *later* than at Greenwich; similarly, if the sun be over the meridian of a place at 9 hours 40 minutes A.M., the longitude is 35° e. (by the chronometer). The accuracy of this method depends evidently on the correctness of time-keepers (see HOROLOGY: WATCH). The other method—that of 'lunar distances'—is briefly as follows: The distance of the moon from certain fixed stars is calculated with great accuracy (about three years in advance) for every three hours of Greenwich time, and published in the *Nautical Almanac*. The moon's distance from some one star having been observed, and corrected for refraction and parallax, and the local time having also been noted, the difference between this local time and *that time in the table which corresponds to the same distance* gives the longitude, which may be converted into degrees as before. The longitude of all places connected by telegraph with the reckoning-point can be easily found by transmitting from the latter a signal to an observer in the place, at a certain fixed time (reckoned in solar time at the reckoning-point), and by the observer instantly and accurately noting the local time at which the signal arrived; the difference of the two times, reduced in the way shown above, will give the longitude, the time occupied in the transmission of the signal being so small as to be neglected. When applied to a heavenly body, the terms latitude and longitude have the same relations to the ecliptic and its poles, and to the point on the ecliptic called the Equinox (q.v.), that terrestrial latitude and longitude have to the equator and a first meridian. The positions of a heavenly body relatively to the equator are called its Declination (q.v.) and Right Ascension (q.v.).

LATITUDINARIANS: name applied by contemporaries to a school of theologians in the English Church in the latter half of the 17th c. It grew out of the earlier movement in favor of a more liberal constitution for the church, represented by Falkland, Hales, Jeremy Taylor,

LATIUM.

and Chillingworth. This earlier movement was mainly ecclesiastical, aiming at a wider extension of the Anglican Church system, and seeking a middle way between the exclusive Prelatists and the strict Independents and Presbyterians, the later movement was mainly philosophical, and had still more directly in view the interests of rational religion. The school was represented by a succession of well-known Cambridge divines, of whom the chief were Whichcote, Smith, Cudworth, and More. Starting from the same ground as Hales and Chillingworth, in the disregard for authority and tradition in matters of faith, and the assertion of the supremacy of reason as the test of truth, their liberalism takes a higher flight, and leads to the discussion of larger questions and principles more fundamental and far-reaching. The Cambridge divines, nurtured on Plato and the later Platonists, sought to wed philosophy to religion, and to confirm the union on an indestructible basis of reason. Theirs was the first attempt to link together philosophy and Christianity ever made by any Protestant school; and, indeed, the first true attempt since the days of the great Alexandrine teachers, to construct a philosophy of religion at once free and conservative, in which the rights of faith and the claims of the speculative intellect should each have free scope and blend together for mutual elevation and strength. This school was attacked by both the old parties in the church, and was freely accused of deistical tendencies.—The term L. is now loosely applied to those who refuse to be bound by a rigid interpretation of doctrinal formulas and by church tradition—e.g., the group known as Broad-Church.

LATIUM, *lā'shī-ŭm*: region in ancient Italy, originally the plain now-known as the Campagna di Roma. It was the home of the Latini, who spread over the country from the sea to the Alban Mts., and from the Anio to the Tiber; though now it is almost uninhabitable because of the Pontine marshes which have been formed by the waters of various streams that found no outlet, and the neglected drainage of the old Latin cities fallen into decay. Here they founded many towns and cities of importance, among which the most prominent were Alba Longa, Lavinium, Antium, Corioli, Ardea, and Tusculum. Thirty of these formed themselves into a confederacy of which Alba was the supreme head. Later the Latin league took the place of this, consisting of all the chief cities of Latium, which about B.C. 493 formed an alliance with the Romans. The Latin league held general assemblies in a sanctuary at the foot of the Alban hills, and had a common place of worship on the summit of Mount Albanus (Monte Cavo), where stood the famed temple of Jupiter Latiaris. This mt. was the highest of a volcanic group occupying the midst of the plain of L., about 30 m. in circuit, and reaching an altitude of 3,000 ft. Nearly the entire surface is made up

LATOUR D'AUVERGNE—LA TRAPPE.

of volcanic deposits, though most of it is very fertile with a belt of sandy shore along the coast. Some of the finest wines were produced in the vicinity of Campania.

After the fall of Alba, Rome entered the Latin league and became its head, from which time the league steadily grew feebler, and was finally overthrown, after the battle of Vesuvius, B.C. 340, and the Latin cities gradually became subjects of Rome and their inhabitants citizens of Rome, as also were those of the neighboring tribes of Hernicans, Volscians, and Auruncans. Thenceforward the name L. was made to comprise them all, and to cover the entire territory from the Tiber to the Liris (Carigliano), and from the sea-shore to the Apennines, though this change was not consummated until the time of Augustus. Pliny calls the original L., *Latium Antiquum*, and the later *Latium Adjectum* or *Novum*.

LATOUR D'AUVERGNE, *lâ-tôr'dô-vârñ'*, THÉOPHILE MALO CORRET DE: 1743, Nov. 23—1800, June 27; b. Carhaix in Finistère, France; of an illegitimate branch of the family of the Dukes of Bouillon. He entered the army 1767; and 1781 served under the Duke de Crillon at Port Mahon. On the outbreak of the Revolution, he attached himself to the national cause. The army of the Alps contained no braver officer than Latour. He was the first to enter Chambery, sword in hand, at the head of his company. But he would not hear of advancement in military rank; and in the following year, though placed at the head of a column of 8,000 grenadiers in the army of the Pyrenees, he continued to wear the uniform of a captain. His corps obtained the name of the 'infernal column,' on account of the dread which its bayonet-charges inspired. When he was subsequently with the army of the Rhine in 1800, as he still refused all promotion, Bonaparte bestowed on him the title of 'The First Grenadier of France.' He was killed at Oberhausen, near Neuburg in Bavaria. French biographies are full of instances of his daring valor, his Spartan simplicity of life, and his chivalrous affection for his friends. When he died, the whole French army mourned for him three days; every soldier set aside a day's pay to purchase a silver urn to hold his heart; his sabre was placed in the church of the Invalides; and each morning, till the close of the Empire, at the muster-roll of his regiment, his name continued to be called, and the oldest sergeant answered to the call: '*Mort au champ d'honneur*' (Dead on the field of honor). L. was not only a brave warrior, but also a man of a studious disposition, and author of *Nouvelles Recherches sur la Langue, l'Origine et les Antiquités des Bretons* (1792), 3d. ed. 1801, entitled *Origines Gauloises*.

LA TRAPPE, *lâ trâp'*: narrow valley in Normandy, dept. of Orne, closely shut in by woods and rocks, and very difficult of access; notable as the place in which the Trappists (q.v.) originated.

LATREILLE—LATRUNCULI.

LATREILLE, *lâ-trây'*, PIERRE-ANDRÉ: 1762, Nov. 29—1833, Feb. 6; b. Brive, dept. of Corrèze, France: naturalist. He received ordination; but applied himself chiefly to entomological studies. In 1796, he published his great work, *Précis des Caractères Génériques des Insectes*. L. was sentenced to *déportation* during the Revolution, and imprisoned, but was ultimately released. After the Revolution he was employed in the arranging of insects in the Museum of Nat. History. He died at Paris. His other most important works are the *Histoires des Salamandres* (1800); *des Singes* (1801); *des Crustacés et Insectes*, 14 vols. (1805); *des Reptiles* (1802); *Genera Crustaceorum et Insectorum* (1809); *Considérations sur l'Ordre Naturel des Animaux* (1810); *Familles Naturelles du Règne Animal* (1825); *Cours d'Entomologie* (1833).

LATRIA, n. *lă-trî'ă* [mid. L. and It. *latria*—from Gr. *latreia*, service, worship—from *latreuō*, I serve]: the highest worship, or that paid to God: *dulia*, the inferior worship paid to saints—a distinction used by the Rom. Cath. Church.

LATRINE, n. *lăt'ren* [F. *latrines*, plu. a privy—from L. *latrīnă*, a privy—from *lavātrīnă*, a lavatory, a privy—from *lāvō*, I wash, I bathe]: a necessary convenience; a water-closet; a privy.

LATROBE, *lă-trōb'*, BENJAMIN HENRY: 1764, May 1—1820, Sep. 3; b. Yorkshire, England: architect. He graduated at the Univ. of Leipsic; served in the Prussian army; studied architecture in London; and became surveyor of public offices and city engineer there 1789. In 1796 he came to the United States; was engineer of the James river and Appomattox canal; builder of the penitentiary in Richmond; designer of the building of the bank of Penn., the Acad. of Art, and the bank of the United States, and engineer of the Schuylkill waterworks in Philadelphia; was architect of the Rom. Cath. cathedral and the U. S. custom house in Baltimore; had charge of the completion of the U. S. capitol and of its rebuilding after the British burned it 1815; was engineer of the Chesapeake and Delaware canal; and was interested with Robert Fulton in his steamboat schemes.—His son, BENJAMIN HENRY L., 1807, Dec. 19—1878, Oct. 19, b. Baltimore, was admitted to the bar, but became a civil engineer, was chief engineer of the Baltimore and Ohio railroad, consulting engineer of the Hoosac tunnel, and a member of the advisory board which approved John A. Roebling's plans of the New York and Brooklyn bridge.

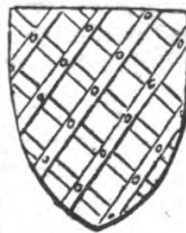
LATRUNCULI, *lă-trŭng'kŭ-lī*: ancient game among the Romans, of unknown origin, but attributed to Palamedes. It had some resemblance to chess, and some have thought it possibly a rudimentary form of that game.

LATTEN—LATTICE.

LATTEN, n. *lăt'ën*, or **LETON**, n. *lě'tôn* [OF. *laton*; F. *laiton*, brass—from OF. *latte*, a lath—so named because hammered into thin plates: It. *latta*, tinned iron plate]: fine sheet or plate brass, or thin plates of mixed metal, used for the brasses of sepulchral monuments, for crosses, etc.; milled brass of different thicknesses; thin plates of mixed metal; tinned iron. **BLACK LATTEN**, sheets of mixed rolled metal, copper and zinc, about the thickness of pasteboard and unpolished; used by braziers, and for drawing into wire. **ROLL-LATTEN**, latten of the other sorts polished on both sides ready for use. **SHAVEN LATTEN**, sheets of the thickness of writing-paper, very bright on both sides. **WHITE LATTEN**, a mixture of brass and tin. **LATTEN WIRE**, wire made from sheet brass.—The term *latten* is now seldom used. It has an archæological interest, as it is often mentioned in old public records without explanation of its nature.

LATTER, a. *lăt'tër* [comp. deg. of *late*]: coming or happening after something else; opposite of *former*. **LAT'TERLY**, ad. *-lī*, lately; in time not long past. **LAT-TER-DAY SAINTS**, **Mormons** (q.v.).

LATTICE, n. *lăt'is* [F. *lattis*, a covering of laths—from *latte*, a lath: Ger. *latte*, a lathe (see **LATH**)]: any interlaced framework of wood, metal, or other material, made by crossing rods or bars at short distances from each other: **ADJ.** made by crossing bars or rods, as lattice-work: **V.** to furnish with a lattice; to form into an open framework by crossing bars or rods. **LAT'TICING**, imp. **LAT-TICED**, pp. *-ist*, furnished with a lattice; covered with diagonal cross-bars. *Lat-ticed*, or *Treillé*, in *her.*, is applied to a shield covered with a decoration resembling Fretty but differing in this respect, that the pieces do not cross over and under each other: those directed from dexter chief to sinister base are placed uppermost and *cloué*, that is, have nails inserted at the joints.



Latticed.

LATTICE-BRIDGE.

LATTICE-BRIDGE: bridge whose sides are constructed with cross-framing resembling lattice-work: see **FRAME-BRIDGE**. Many very large bridges of this kind have been erected with timber-framing: one over the Susquehanna at Columbia, Penn., is about one mile and a quarter long, and has 29 spans, each 200 ft. wide. The principle on which many lattice-bridges are constructed resembles that of the trussed rafters of roofs (A, B, C, fig. 1), with a king-post or hanger in centre. Each spar

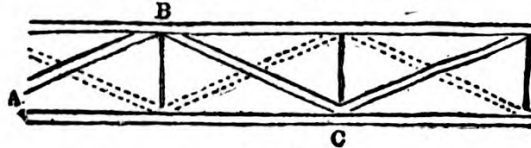


Fig. 1.

consists of a series of these rafters, so arranged that the head of one rafter (B) is immediately over the feet of the two adjoining rafters. Other lattice-bridges are constructed with diagonal braces, united with strong pins, and without suspension-rods. The former method is the stronger, as in the latter the strain comes chiefly on the pins uniting the diagonal cross-braces. Lattice-bridges are constructed in iron also, and have been much used for railways. The first application of the lattice principle to iron was made by George Smart, who registered, 1824, his 'patent iron bridge.' Many modifications of the same principle have been adopted—the horizontal ties at top and bottom being always of wrought iron, and the diagonals either simple wrought-iron bars, or hollow malleable iron tubes, or of cast iron. The wrought-iron tubular bow-bridge, now in common use in railway con-

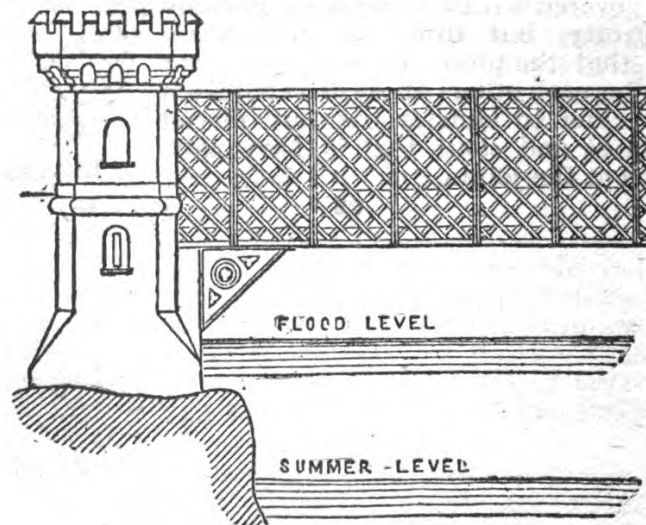


Fig. 2.

struction, is a combination of the tubular and the lattice principle: see **TUBULAR BRIDGES**. Fig. 2 shows a por-

LATTICE LEAF—LAUD.

tion of the lattice bridge over the Ouse at Lendal Ferry, York, England, as designed by Mr. Dredge, C.E. The bridge has a clear span of 175 ft. 6 inches.

LATTICE LEAF, or LACE LEAF, or WATER YAM, or OUVIRANDRANO (*Ouvirandra fenestralis*): plant referred by some botanists to the nat. ord. *Juncagineæ*, and by some to *Naiadaceæ*. It is a native of Madagascar, and grows in running streams. It has a root-stalk about the thickness of a man's thumb, six to nine inches long, often branching, internally white, with a light-brown skin, farinaceous, and used for food. The crown of the root is under water, and the leaves float just under the surface; the flower-stalks rise above it. The flowers are in forked spikes. The leaves are very curious; the blade resembling lattice-work or open needle-work of a most regular pattern; the longitudinal ribs being crossed at right angles by fine tendrils, and the intervening spaces being open. The blade is of an elongated oval form, abruptly acuminate; the length of the stalk varies according to the depth of the water. The whole appearance of the plant is very beautiful. It grows well in hothouse aquaria in Britain.

LAUBAN, *low'bân*: town of Prussia, province of Silesia, in a charming valley on the Queis, 40 m. W.S.W. of Liegnitz. Chief occupations are woolen, linen, and cotton weaving, bleaching, printing, dyeing, and bell-founding. Pop. (1880) 10,775.

LAUD, v. *lawd* [L. *laudo*, I praise—from *laus*, praise: It. *laude*, praise]: to praise; to extol; to celebrate. **LAUD'ING**, imp. **LAUD'ED**, pp. **LAUD'ABLE**, a. -*ă-bl*, praiseworthy; commendable. **LAUD'ABLY**, ad. -*blĭ*. **LAUD'ABLENESS**, n. -*bl-nĕs*, the quality of deserving praise. **LAUDATION**, n. *law-dă'shŭn*, praise; commendation. **LAUDATORY**, a. *lawd'ă-tĕr-ĭ*, containing praise: N. that which contains praise. **LAUDS**, in the *Roman Breviary*, the part of the service of the first canonical hour—viz., *matins*,—which immediately follows the third *nocturn*: see **CANONICAL HOURS**: also **CANON**: **MATINS**: **NOCTURNS**.

LAUD.

LAUD, *lawd*, WILLIAM, Archbishop of Canterbury: 1573, Oct. 7—1644, Jan. 10; b. Reading, Berkshire; son of a clothier in good circumstances. He entered St. John's College, Oxford, 1589, became a fellow 1593, and took his degree A.M. 1598. Ordained a priest 1601, he soon made himself conspicuous at the university by his antipathy to Puritanism; but being then a person of little consequence, he succeeded only in exciting displeasure against himself. Yet his learning, his persistent and definite ecclesiasticism, and the unselfishness of his devotion to the church, soon won him friends and patrons. In 1607, he was preferred to the vicarage of Stanford, Northamptonshire, and 1608 obtained the advowson of North Kilworth, Leicestershire. In both of these livings he showed himself an exemplary clergyman according to the High-church pattern—zealous in repairing the parsonage-houses, and liberal in maintaining the poor. In 1609, he was appointed Rector of West Tilbury, Essex; 1611—in spite of strong opposition—Pres. of St. John's College; 1614, Prebendary of Lincoln; and 1615, Archdeacon of Huntingdon. King James now began to recognize what sort of a man L. was, and to see that he might rely on him as a valuable ally in carrying out his notions of the 'divine right.' Not that their aims were identical—James was anxious chiefly to maintain the absolute authority of the sovereign, and L. the absolute authority of episcopacy. In 1617, L. accompanied the king to Scotland, with the view of introducing episcopacy into the church-govt. of that country; but the attempt failed. In 1621, he was consecrated Bp. of St. Davids. After the accession of Charles I., he was translated from the see of St. Davids to that of Bath and Wells, became high in favor at court, was more than ever hated by the Puritans, and was denounced in parliament. In 1628, he was made Bp. of London. After the assassination of Buckingham (q.v.), L. became virtually the chief minister of Charles, and acted in a manner so utterly opposed to the spirit of the times and to the opinions of the great body of Puritans in England, that one might have foreseen his ruin to be inevitable, in spite of the royal favor. In 1630, he was chosen chancellor of the Univ. of Oxford, the centre of High-church loyalty. From this period he was for several years busily but fruitlessly employed in repressing Puritanism. The means adopted were not only unchristian, but detestable. Cropping the ears, slitting the nose, branding the forehead, fines, imprisonments, are not at any time satisfactory methods of defending a religious system, but in the then temper of the English nation they were in the last degree weak and foolish. In the high-commission and star-chamber courts, the influence of L. was supreme; but the penalty he paid for this influence was the hatred of the English parliament and of the people generally. In 1633, he was raised to the archbishopric of Canterbury, and in the same year made chancellor of the Univ.

LAUD.

of Dublin. The famous ordinance regarding Sunday sports, published about this time by royal command, was believed to be drawn up by L., and greatly increased the dislike of the Puritans to him. His minute alterations in public worship, his regulations about the proper position of the altar and the fencing of it with decent rails, his forcing Dutch and Walloon congregations to use the English liturgy, and all Englishmen to attend the parish churches where they resided, evince a petty intellect and an intolerant spirit; as other of his actions indicate that there lurked in his small obstinate nature considerable cruelty and malice. Still, it is now evident that in the long run, L.'s ritualism has triumphed. The Church of England was gradually penetrated with his spirit, and the high value which she has come to put on religious ceremonies is partly due to the pertinacious efforts of the archbishop. This influence, however, is one of those which have operated against a minute formalism in doctrine, and so saved her from becoming as doctrinal and *Calvinistic* as her articles would logically necessitate. If this earnest archbishop had insisted as strongly on liberty in the church regarding forms of worship, as he insisted on liberty regarding forms of doctrine, he might have prepared for the national church a grander career; though undeniably he would have been more than two centuries in advance of his contemporaries of all parties. Uniformity, either in doctrine or in worship, was in that day, all the unity recognized by ecclesiastical leaders. During 1635-37, another effort was made by L. to establish episcopacy in Scotland; but the first attempt to read the liturgy in St. Giles's Church, Edinburgh, excited a dangerous tumult. The Scots, occupying the northern counties of England 1640, and sending commissioners of peace to London, demanded the punishment of L. as the great disturber of the peace. Proceedings were finally taken against him, and he was, by order of the house of commons, conveyed to the Tower. Here, proceedings were stayed for a time; but fresh need of conciliating the Scots, led (1643) to his impeachment being proceeded with. After being stripped of his honors, and exposed to many indignities and much injustice, he was finally brought to trial before the house of lords, 1643, Nov. 13, on a charge of treason and other crimes. The lords, however, did not find him guilty; but the commons had previously resolved on his death, and passed an ordinance for his execution. To this the upper house gave its assent; and in spite of L.'s producing a royal pardon, he was—undoubtedly in violation of express statute, and by the exercise of a prerogative of parliament as arbitrary as any king had ever exhibited—beheaded, 1644, Jan. 10. L. had a genuine regard for learning—at least ecclesiastical learning—and enriched the University of Oxford, in the course of his life, with 1,300 MSS. in different European and Oriental languages; but his exclusive sacerdotalism, his inability to

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understand his fellow-creatures, and his consequent disregard for their rights, together with his savage cruelty, forbid us to approve his character, though we pity his fate. His writings are few. Wharton published his *Diary* 1694; and 1857-60, Parker, Oxford publisher, issued *The Works of the Most Reverend Father in God, William Laud, D.D., sometime Lord Archbishop of Canterbury*, containing, among other things, his letters and miscellaneous papers, some of them not before published, and, like his *Diary*, of great help toward an adequate conception of the man and his time.

LAUDANUM, n. *lawd'ă-nŭm* [L. *ladānum*; Gr. *ledanon*, the resinous substance exuding from the shrub *luda*: said by some to be a mere corruption of L. *laudē dignum*, 'worthy of praise,' from its soothing qualities—this is hardly probable]: tincture of opium; a preparation of opium in spirits; most generally used of all the preparations of opium. It is obtained by macerating the sliced or powdered drug in spirit, and filtering. It is of deep brownish-red color, and possesses the peculiar odor and smell of opium. One of the greatest objections to it is, that it is liable to great variations of strength. Dr. Christison remarks: 'L. is made by all the colleges with such proportions of the opium and spirit that about 13½ minims, or about 25 drops, contain the entire part of one grain of opium. But the London tincture may be sometimes 16 per cent. stronger than the others, as dry opium is directed to be used.' This medicine is, moreover, very often adulterated.

L. is a powerful anodyne and soporific, but more liable to cause headache than the solution of one of the salts of morphia. For its general action and uses, see **OPIUM**. The dose for an adult varies from ten minims to a dram. To children it must not be given without extreme caution. *One minim*, equivalent to the 120th part of a grain of morphia, has been known to prove fatal to an infant.

LAUDATION, **LAUDATORY**, etc: see under **LAUD**.

LAUDERDALE, *law-dēr-dāl'*, JOHN MAITLAND, Duke of: see **MAITLAND**, JOHN, Duke.

LAUDIAN MANUSCRIPT (Co'DEX LAUDIA'NUS): valuable MS. of the Acts of the Apostles, in uncial letters, showing the Greek text in parallel columns with a literal Latin version which differs from the Vulgate and from Jerome's—xxvi. 29, to xxvii. 26, missing. Its probable date is about the 6th c., and place of writing w. Europe. It is named from Abp. Laud, who presented it to Oxford Univ. 1636. It is in the Bodleian Library: its number is 35. Pub. by Hearne 1715.

LAUDONNIÈRE, *lō-dō-nē-är'*, RENÉ GOULAIN DE: French navigator of the 16th c.; sent by Coligny, 1562 to colonize the French Protestants in America. L. established the colony on the St. John's River, Fla.; but nearly all were soon massacred by the Spaniards: see **FLORIDA** (*History*).

LAUENBURG—LAUGH.

LAUENBURG, *low'én-bûrg*, or **SAXE-LAUENBURG**, *säks-*: duchy belonging to Prussia, formerly united to the crown of Denmark. In the earlier half of the 13th c., it fell into the possession of the Duke of Saxony, one of whose sons became founder of the ducal house of Saxe-Lauenburg. After the extinction of this line, it was inherited by the Duke of Brunswick-Celle 1689, and passed into the possession of the Hanoverian kings of Great Britain, was seized, with Hanover, by the French 1803; and afterward, with some changes of boundary, was made over to Prussia, and by Prussia transferred to Denmark, but with reservation of all rights and privileges. By the treaty of Gastein 1865, it came into the possession of Prussia. It lies on the right bank of the Elbe, and borders on Hanover and Mecklenburg; area 400 sq. m.; well-cultivated and fertile. In 1876, L. was finally incorporated with the province of Schleswig-Holstein, of which it is now a district. Pop. (1880) 49,185.—The town of L., former cap. of the duchy, is on the Elbe; pop. (1880) 4,726. It dates from 1182, and contains the old ducal palace.

LAUENBURG: manufacturing town of Prussia, Pomerania, 38 m. w.n.w. of Danzig. Pop. (1880) 7,192.

LAUGH, n. *lâf* [Ger. *lachen*; Dut. *lachachen* and *lagchen*; Icel. *hlæja*, to laugh: an imitative word]: the expression of mirth peculiar to man: V. to exhibit the appearance of the features, and utter the sounds, caused by mirth. **LAUGH'ING**, imp.: **ADJ.** expressing mirth; having the character of laughter: N. a brief expression of mirth or pleasure indicated by convulsive sounds more or less audible. **LAUGHED**, pp. *lâft*. **LAUGH'ER**, n. *-ér*, one who laughs. **LAUGH'ABLE**, a. *-ä-bl*, of a kind to excite laughter; droll. **LAUGH'ABLY**, ad. *-blŭ*. **LAUGH'ABLENESS**, n. *-bl-nēs*, the quality of being laughable. **LAUGH'INGLY**, ad. *-lŭ*. **LAUGHING-STOCK**, *-stök*, an object or butt of ridicule. **LAUGHING-GAS**, a gas, nitrous oxide, which causes anæsthesia, and occasionally involuntary laughing, when inhaled into the lungs (see **NITROGEN**). **LAUGHTER**, n. *lâft'ér* [AS. *hleahtor*; Icel. *hlatr*, laughter]: certain involuntary movements of the muscles of the face and lips, with peculiar and varying expressions of the eyes, together with convulsive sounds more or less audible, normally indicating mirth or great satisfaction (see **LAUGHTER** below). **LAUGHTER'LESS**, a. *-lēs*, without laughter. To **LAUGH AT**, to ridicule or deride; to treat with contempt. To **LAUGH IN THE SLEEVE**, to laugh secretly, while apparently preserving a grave or serious demeanor toward the person laughed at. To **LAUGH TO SCORN**, to deride; to treat with mockery.—**SYN.** of 'laughable': comical; ludicrous; mirthful.

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LAUGHTER: muscular movements and convulsive sounds naturally expressive of the sense of *the ludicrous*. This peculiarly human expression has occasioned much discussion and controversy, being connected with a large and important class of effects, named the ludicrous, also with wit and humor. We advert first to the physical part of the phenomenon, then to the mental causes or accompaniments of it. Physically, L. is a convulsive action of the Diaphragm (q.v.). In this state, as remarked by Sir Charles Bell, the person 'draws a full breath, and throws it out in interrupted, short, and audible cachinnations.' This convulsion of the diaphragm is the principal part of the physical manifestations of laughter; but there are several accessories, especially the sharp vocal utterance arising from the violent tension of the larynx, and the expression of the features, this being a more intense form of the smile, the characteristic of pleasing emotions generally. In extreme cases, the eyes are moistened by the effusion from the lachrymal glands.

The causes of L. are both *physical* and *mental*. Among physical causes, we must rank first hilarity, or animal spirits generally. When there is a great overflow of good spirits, it takes the form of the laugh among other violent manifestations. The rebound of robust natures from constraint or confinement, as when children are released from school, is marked with uproarious glee and excitement. L. is produced sometimes by the application of cold, as in the cold bath. Another notable form is the hysterical fit, where the explosiveness of the nervous system is an effect of disease, and followed by exhaustion.

The *mental* causes of L. (now limiting the term strictly to its relation to *the ludicrous*) are what have given rise to the controversy. To determine the common characteristic of all those things termed 'ludicrous,' has been found a problem of unusual difficulty. Various theories have been propounded, all with some truth, perhaps none entirely explaining the facts. Aristotle lays it down that 'the ridiculous implies something deformed, and consists in those smaller faults which are neither painful nor pernicious, but unbeseeming—thus, a face excites laughter wherein there is deformity and distortion without pain.' Here he touches upon several of the important conditions—viz., that there should be some strangeness or deviation from the ordinary appearances of nature, that this deviation should be on the side of degradation or inferiority, and that it should not be of a kind to excite any other strong emotion, as pity. Hobbes has given a theory to the effect that L. is 'a sudden glory, arising from a sudden conception of some eminency in ourselves by comparison with the infirmity of others, or with our own formerly.' This evidently suits a certain number of cases, especially the laugh of ridicule, derision, and contempt. It is not easy to reconcile it with the

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humorous and genial laughter of those that are little given to self-glorification or exultation over other men's discomfiture. Partly owing to this deficiency, and partly from the harsh judgment of human nature implied in it, this theory has been very unpopular. It has been contended, in opposition to Hobbes, that there are jests that do not imply the degradation of any living being; and that we often feel contempt for others, and sudden glorying in ourselves by the comparison, without being urged to laughter. As to the first of these allegations, Campbell, *Philosophy of Rhetoric*, adduces the following instance: 'Many,' he says, 'have laughed at the queer-ness of the comparison in these lines (from *Hudibras*):

For rhyme the rudder is of verses,
With which, like ships, they steer their courses,

who never dreamed that there was any person or party, practice or opinion, derided in them.' But (aside from the fact that not laughter but a smile would be the usual effect of these lines) in addition to the agreeable surprise caused by the novelty of the comparison, which is the chief ingredient in wit, and may exist without any degradation of the subject, there is here a most apparent degradation of the poetic art, hallowed as it is in men's minds by the most dignified associations as something akin to divine inspiration, and now reduced to a vulgar mechanism of rhyme-making. Hobbes confines his definition too much to actual persons; for the laugh may be raised against classes, parties, systems, opinions, institutions, and even inanimate things supposed to be personified. It would not be easy to produce any unequivocal instance of a laugh (note the limitation above 'to the ludicrous') raised without degrading some person or interest, while in a vast number of cases this circumstance is the indispensable and admitted condition of the effect.

Dr. Campbell himself, while challenging the theory of Hobbes, substitutes nothing in its place except an enumeration of the most prominent kinds of ludicrous effects. These are, first, the debasement of things great and eminent; secondly, the aggrandizement of little things by the language of splendor; and thirdly, the queerness or singularity of the imagery. Now, as regards the first of these, the debasement of things eminently great—by far the largest class—the doctrine of Hobbes, properly guarded, may be found applicable. There is, in minds of a certain type, a strong satisfaction in pulling anything down from a high pinnacle to plunge it in the mire, which some interpret only as a mode of the sentiment of Power, one of the most energetic and deep-seated passions of the human mind, but which may be viewed rather as an evil manifestation of the *pride* of power. This sentiment is gratified by every striking effect that we can produce ourselves; and few effects are more striking than to debase or humiliate

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some person or interest from a proud eminence; and not only so, but (what Hobbes neglected to remark) also by seeing the same effect produced by the agency of some other person. A familiar mode of pandering to the sense of power is to put any one to fright; even the child can chuckle over this triumph of its young ability. Campbell's second class of cases might seem at first sight the opposite of the first, and thereby to contradict the general theory which that illustrates. But when mean and little things are aggrandized, by elevated phraseology, so as to raise a laugh, it will always be found that the effect is owing, not to the raising of the subject, but to the degrading of the dignified language by connection with such a subject. This is the so-called *mock-heroic*, where the grand and the lofty in speech being employed on the mean and insignificant, are debased to the level of what they are applied to. Such is the nature of *parody*. So that, in fact, Campbell's second species is merely a variety of the first. The third species, marked by 'queerness and singularity of imagery,' is really nondescript, but analysis may show that the element of *surprise* has more to do in producing the laugh in such cases, than any pleasure in the abasing of any person or interest, more indeed than any mere sense of the ludicrous. The pleasure may be merely the effect of novelty, or quick discovery: the ludicrousness may apply only to one's self as having been so easily caught at unawares.

In short, Hobbes' principle may suffice to explain all L. that is not produced by pure wit, humor, geniality, or merely physical causes: it explains L. in which wit and humor serve selfishness and pride: above this line its explanation fails. It is an unpleasing comment on human nature, when it is claimed that nine cases out of every ten of the genuinely ludicrous are cases of the pleasure of degrading something; and when it is claimed further that this fact furnishes a considerable presumption that the remainder are of the same general character, though perhaps enveloped with circumstances that disguise the fact.

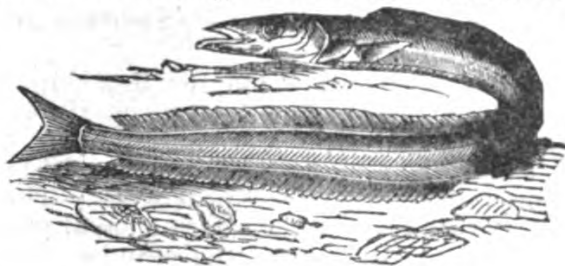
The figures of a powerful imagination, the resources of learning, and the polish of rhetorical art, may enter into a ludicrous combination. Such we have in the works of the great comic writers—in the plays of Aristophanes, Molière, and Shakespeare, and in the humor of Cervantes, Addison, Swift, and Sydney Smith.

LAUMONITE, *law'mo-nīt*, or LAUMONTITE, n. *law'mōn-tīt* [after M. de *Laumont*]: a mineral, one of the zeolites, occurring in druses in the trap-rocks, and forming a silicate of alumina and lime—called also EFFLORESCENT ZEOLITE, because crumbling easily on exposure to the air.

LAUNAY, *lō-nā'*, EMMANUEL-LOUIS-HENRI DE: see ANTRAIGUES.

LAUNCE—LAUNCESTON.

LAUNCE, *lâns* (*Ammodytes*): genus of fishes, of the eel tribe, with very elongated body, elongated head, large gill-openings, dorsal fin extending nearly the whole length of the back, anal fin also long, tail-fin distinct from them both, and forked. One species, **SAND-EEL**, (name restricted by some writers to the larger and less abundant *A. Tobianus*), is about 12 inches long, the



Sand Launce (*A. lancea*).

Hornel of the Firth or Forth. A smaller species (*A. lancea*), five or six inches long, is much used as bait by fishermen. Both are very delicate and palatable. They are of beautiful silvery color. The under jaw projects beyond the upper, and is used in burrowing in the sand, to which these fishes retreat when the tide retires. They are obtained by digging in the sand, or by a kind of rake, or by nets drawn along the sand covered by the sea.

LAUNCESTON, *lâns'ton*: parliamentary and municipal borough of England, formerly cap. of the county of Cornwall, on the Kensey, tributary of the Tamar, 21 m. n.e. of Bodmin, 213 m. w.s.w. of London. It is a very old town; its castle, frequently besieged during the wars of Charles I., was held of the Conqueror by the Earls of Moreton. Pop. of mun. borough (1881) 3,217.

LAUNCESTON: second town of Tasmania, or Van Diemen's Land; chief port of entry and mart of trade for the north of the island; incorporated 1858. It stands at the junction of the Esk with the Tamar, which, after a course of 32 m., enters Bass's Strait (q.v.) at Port Dalrymple. It is accessible to ships of considerable burden, and has thriving commerce with the colonies of Victoria and S. Australia. Among the principal buildings are a church, a govt.-house, a court-house, a jail, a college, a bank, and barracks, and schools. L. has a well-patronized mechanics' institute, with library of 6,000 vols. There were (1879) a grammar-school, 33 private schools, and 3 public schools. The imports consist of manufactured goods, tea, sugar, etc. Chief articles of export are wool, oats, wheat, flour, timber, potatoes, horses, fruits. In the surrounding district of the same name rises Benlomond, to the height of 4,500 ft. Pop. (1870) 10,668; (1881) 12,753.

LAUNCH—LAUND.

LAUNCH, v. *lânsh* [F. *lancer*; It. *lanciare*, violently to throw, to hurl—from L. *lancĕā*, a lance]: to dart or let fly; to commence, as an enterprise; to move or cause to move into the water, as a ship; to go or fly off; to go or send forth; to plunge; to expatiate in language: N. largest boat carried by a man-of-war (see below): the act of launching or putting a new-built ship off the stocks into the sea. **LAUNCHING**, imp. **LAUNCHED**, pp. *lânshĕt*. See **LAUNCH** below.

LAUNCH: largest boat belonging to a ship. The L. has nearly superseded the long-boat, formerly the principal of a ship's boats. In modern ships of war, the L. is usually a small steamer, fully equipped, with capabilities for stowing several days' provisions. The L. of a man-of-war is frequently armed with a small piece of artillery in the bow; and when the ship is employed in narrow seas or rivers, it is not unusual for the launch to be dispatched on expeditions far from the ship, and to points which the ship is unable to reach.

LAUNCH: process of removing a newly built vessel from the land to the water. The keel of a ship is laid upon a series of wooden blocks, six or seven ft. apart, and built up three or four ft. from the ground, the tops of which lie in a line which slopes downward to the water at an angle of about five-eighths of an inch to the foot. The whole ship, therefore, when finished, slopes downward with this inclination, and rests upon the blocks just mentioned, and upon suitable timber shores under it and at its sides. When the vessel is ready for launching, 'ways' of planking are laid down parallel to the keel, and at some little distance on each side of it, under the bilges of the ship; they extend into the water a considerable distance below high-water mark. A 'cradle' is then built under the ship, of which the bottom is formed of smooth timbers resting upon the ways. Before launching, the under sides of these timbers and the upper sides of the ways are well greased, and the weight of the ship is transferred from the keel-blocks to the cradle and ways. Timbers, called 'dog-shores,' are placed so as to resist the tendency of the ship to slide down until the right moment. When this arrives, at high-water, the ceremony of naming the ship takes place; the dog-shores are knocked away, and the vessel glides stern foremost into the water. As soon as the water removes the weight of the vessel from the cradle, the latter breaks up into pieces.

The *Great Eastern*, because of her immense length, was built with her keel parallel to the water; but owing to excessive friction, it took three months' exertion, even with the aid of powerful hydraulic rams, to push the immense mass of 12,000 tons into the river.

LAUND, n. *lawnd*: OE. for **LAWN**, a small grass park; a grassy open space in a forest.

LAUNDER—LAUREATE.

LAUNDER, n. *lân'dêr*: [OE. *lavandre*, a launder—from *L. lavārē*, to wash]: a long hollow trough used by miners in washing powdered or broken ore: V. to wash, as ore; in *OE.*, to wash; to wet. **LAUN'DERING**, imp. **LAUN'DERED**, pp. *-dêrd*.

LAUNDRESS, n. fem. *lân'drēs* [OE. *lavanderess*, a laundress: OF. *lavandière*, a washerwoman—from mid. *L. lavandēriā*, a washerwoman: It. *lavanda*, suds—from *L. lavārē*, to wash]: a woman whose employment is to wash and get up linen. **LAUN'DRY**, n. *-drī*, a room where clothes are washed and done up. **LAUN'DRY-MAID**, a woman who attends to the laundry.

LAURA, n. *law'ra* [Gr. *laura*, a lane, an alley, cloister; hence, a hermitage, a monastery]: in. *chh. hist.*, an aggregation of separate cells built in desert places, or hewn in rocky places, tenanted by monks under the control of a superior. Usually but one monk occupied a cell.

LAU'RA: see **PETRARCHA**, **FRANCESCO**.

LAURACEÆ, *law-rā'sē-ē*: natural order of exogenous plants, consisting of trees or shrubs which have leaves without stipules, and flowers in panicles or umbels. The perianth is 4-6-cleft; the stamens opposite to its segments, and twice as many. The fruit is a one-seeded berry or drupe; the fruit-stalk often enlarging and becoming fleshy.—This order contains about 450 known species, mostly tropical. An aromatic and fragrant character pervades the order, and among its products are cinnamon, cassia, and other aromatic barks; also a number of aromatic fruits somewhat resembling nutmeg: see **NUTMEG**. The timber of some species, as green-heart, is valuable; some are valuable for their medicinal barks, as greenheart (bebeeri) and sassafras; some for their secretions, of which camphor is the most important. *Oreodaphne opifera*, a S. American tree, yields a camphoraceous volatile oil in great quantity, if mere incisions are made in its bark. The fruit of some species is agreeable, as the Avocado Pear (q.v.).—A few very remarkable species, forming the genus *Cassytha*, have been united with this order by many botanists, though others separate them as a distinct order. They are climbing parasites, like dodders, and inhabit the woods of the hottest parts of the globe.

LAUREATE, a. *law'rē-āt* [F. *lauréat*, a poet-laureate—from *L. laurēātus*, decked with laurel—from *laurus*, a laurel: It. *laureato*]: decked or invested with laurel. **POET-LAUREATE** (see **LAUREATE**, **POET**). **LAU'REATE-SHIP**, n. office of a laureate. **LAUREATION**, n. *law'rē-ā-shūn*, act of conferring academical degrees.

LAU'REATE, POET: officer in the household of the sovereigns of Great Britain. The appellation seems to have originated in a custom of the English universities of presenting a laurel wreath to graduates in rhetoric and versification; the new graduate being then styled *Poeta Laureatus*. The king's laureate was then simply

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a graduated rhetorician in the service of the king. R. Whittington, 1512, seems to have been the last man who received a rhetorical degree at Oxford. The earliest mention of a poet-laureate in England occurs in the reign of Edward IV., when John Key received the appointment. In 1630, the first patent of the office seems to have been granted. The salary was fixed at £100 per annum, with a tierce of canary; which latter emolument was, under Southey's tenancy of the office, commuted into an annual payment of £27. It used to be the duty of the laureate to write an ode on the birthday of the sovereign, and sometimes on the occasion of a national victory; but this custom was happily abolished toward the end of the reign of George III. The following poets have held the office of laureate since 1670: John Dryden, Nahum Tate, Nicholas Rowe, Laurence Eusden, Colley Cibber, William Whitehead, Thomas Wharton, Henry James Pye, Robert Southey, William Wordsworth; and since 1850, Lord Tennyson.

LAUREL, n. *law'rĕl* [F. *laurier*, a laurel, a bay tree—from *L. laurus*, a laurel], (*Laurus*): a genus of *Lauraceæ* (q.v.), which, as now restricted, contains only a single known species, the NOBLE L., VICTOR'S L., or SWEET BAY (*L. nobilis*), native of Asia Minor, but now diffused over all the countries around the Mediterranean Sea. It is often a mere bush of 15 ft. or less, but sometimes becomes a tree of 30 or even 60 ft. high. It has rather large, lanceolate, leathery, shining leaves, reticulated with veins, and axillary clusters of yellowish-white flowers. The fruit is oval, bluish-black, and about half an inch long. Both the leaves and the fruit are bitter, astringent, and agreeably aromatic, and were formerly much used in medicine as a stomachic and stimulant, but are now almost out of use. The leaves, however, are still sometimes used in cookery for flavoring: they contain a volatile oil (*oil of sweet bay*), and a bitter, gummy extractive.

By the ancient Greeks, the L. was called *daphne*; it was sacred to Apollo. Berry-bearing twigs of it were wound round the forehead of victorious heroes and poets; and in later times, the degree of Doctor was conferred with this ceremony—whence the term *laureation*; and, according to some, the term *Bachelor* (q.v.). And to this day, a L. crown is the emblem of the honor to which poets, artists, and warriors aspire.

The Noble L. or Bay, or Sweet L. is common in parts of the United States: it shares the name L. with other shrubs botanically very different, but somewhat similar in their evergreen foliage. LAU'RELLED, a. *-rĕld*, crowned with laurel. LAUREL-WATER, a liquid distilled from the leaves of the cherry-laurel which contains hydrocyanic or prussic acid—consequently poisonous; seldom prescribed medicinally, but given sometimes as a sedative narcotic in very small doses, for neuralgic pains, spasmodic cough, and palpitation of the heart; i.e., when

LAUREL RIDGE—LAURENS.

hydrocyanic is applicable. Death has resulted from its incautious use as a flavoring ingredient in creams and puddings. LAURIF'EROUS, a. -rîf'ér-ûs [L. *fero*, I carry]: producing or bearing laurel LAU'RINE, n. -rîn, a bitter principle found in the laurel.

LAU'REL RIDGE: southern portion of Chestnut Ridge, in s.w. Penn., extending from Youghiogheny river s.w. to the Cheat river in the s.w. part of Fayette co. Here it reaches the height of 2,000 ft. above sea-level. Thence it extends through Monongahela, Taylor, and Marion cos. in W. Virginia. It is covered with evergreens, sugar maple, wild cherry, oak, poplar, and the other usual forest trees, and contains apparently inexhaustible beds of bituminous coal.

LAURENS, *law'rénss*, HENRY: 1724-1792. Dec. 8; b. Charleston, S. C.; of French Huguenot stock: statesman. He received a commercial education at home and in London, and became wealthy in mercantile business. He was active in opposing every form of British aggression, and was drawn into frequent contests with the crown judges because of their unjust decisions in admiralty proceedings. In 1771 he went to England, and while there attempted to avert the war with the American colonies, and joined other Americans in the petition to parliament against adopting the Boston Port Bill. He returned home 1774; was delegate to the provincial congress and pres. of the colonial council of safety 1775; elected delegate to the continental congress 1776; pres. of that body 1777, Nov. 1-1778, Dec. 10; appointed minister to Holland to negotiate a proposed treaty 1779; was captured at sea by a British war vessel, taken to London, and imprisoned for 15 months in the Tower on a charge of high treason; was released and exchanged for Lord Cornwallis 1781; and shortly afterward was commissioned by congress to negotiate peace with England, with Benjamin Franklin and John Jay as his colleagues. During his confinement in the London Tower, he twice refused pardon conditioned on his serving the British ministry, and was vainly urged to advise the withdrawal of his son John from the commission to negotiate a loan in France for the colonies. He signed the preliminaries of the treaty 1782, Nov. 30, and was enthusiastically welcomed on his return home. Various public offices were tendered him, but he declined on account of debility resulting from his imprisonment, and passed the remainder of his life on a farm. In accordance with his will, his body was cremated.

LAU'RENS, JOHN: soldier: about 1756-1782. Aug. 27; b. S. C.; son of Henry L. He was educated in England, returned home at the beginning of the revolutionary war; joined the army; became aid and sec. to Washington; and served with the commander-in-chief from the battle of Brandywine, 1777, Sep. 11, till the capitulation at Yorktown, 1781, Oct. 19. He showed such valor on

LAURENTIAN SYSTEM—LAURENTUM.

the field—'intrepidity bordering upon rashness' as Washington expressed it—that he won the sobriquet of the Bayard of the American revolution. He shot Gen. Charles Lee in a duel for disrespect to Washington at Monmouth, and was several times wounded in action. After the fall of Charleston he was sent to France by Washington to procure money and military supplies; became exasperated at the delay of the French ministry and the equivocal dealings of some of its members, and made his demand in person of the king; and securing a pledge of assistance, hastened home, received the thanks of congress, and rejoined the army. He captured a redoubt at Yorktown, and after the surrender joined Gen. Greene in his campaign in the south. He was killed while leading a brigade against the British on the Combahee river.

LAURENTIAN SYSTEM, *law-rěn'shĭ-ăn*: in *geol.*, the highly crystalline strata which belong especially northward of the valley of the *St. Lawrence*; series of highly metamorphosed rocks, older than the Cambrian, and apparently the fundamental series of the stratified rocks. They belong to the *archæan* age, the age of the first appearance of organic life. The archæan age is divided into two periods, of which the L. is the lower, and the Huronian the upper—styled sometimes upper and lower Laurentian. The L. consists of hornblendic and micaceous gneiss, alternating with or passing into mica-schist, the whole being considered to have been originally sedimentary deposits, and to have been thus altered by long-continued metamorphic action. A few large, irregular beds of crystalline limestones, and bed-like masses of magnetic oxide of iron and other minerals are interstratified with the gneiss. True igneous rocks are frequently intruded among these strata, as veins and masses of granite, syenite, and greenstone. The beds are highly inclined and greatly contorted, so that no approximate estimate can be made of their thickness, though it is supposed to be very great. The L. rocks are well exposed in n.w. Scotland, where they form nearly the whole of the Outer Hebrides. In no part of the system as seen in Scotland has any organic structure been detected; though some paleontologists have endeavored to prove the existence of fossil organisms in rocks of this order in Canada: see Eozoon.

LAURENTIUS, SAINT: see LAWRENCE, SAINT.

LAURENTUM, *law-rěn'tŭm*: maritime town in anc. Italy, cap. of Latium, about 16 m. from Ostia. It had beautiful groves of laurel, and was a favorite winter resort of the Roman nobility. The younger Pliny had a villa here, which he describes. L. having been deserted and falling into ruin, was restored and united with Lavinium as a new city, Lauro-Lavinium.

LAURESTINE—LAUSANNE.

LAURESTINE, n. *law'rēs-tīn*, or **LAURUSTIN**, n. *-rūs-tīn*, or **LAURUSTINUS** [*L. laurus*, the laurel; *tinus*, the laurestine], (*Viburnum Tinus*, see **VIBURNUM**): beautiful evergreen shrub, frequent in pleasure-grounds in Britain, native of s. Europe and n. Africa. It has dark, shining, leathery leaves, small whitish flowers in corymbs, and small blackish-blue berries. The flowers appear in winter or very early spring. The berries have drastic, purgative properties; they are very acrid, and inflame the mouth violently, yet some kinds of birds eat them with avidity. The L. cannot endure much frost; and in Germany and the northern United States, it is a green-house plant.

LAURIA, *low'rē-ā*, or **LORIA**, *lo'rē-ā*: town of Italy, province of Potenza, 98 m. s.e. by e. from Naples, about five m. from the shore of the Gulf of Policastro. Opposite is the imposing mass of Monte Sirino. L. is an ancient town, but still prosperous. Woolen manufactures are carried on. It consists of two parts--Upper and Lower L. Total pop. more than 10,000.

LAURINE: see **LAUREL**.

LAURIUM, *law'rī-ūm*: promontory in s.e. Attica, part of Greece on the Ægean Sea; famed from ancient times for its mines of silver, zinc, and antimony. The mines are still worked.

LAURVIK, *lowr'vik*, or **LAURVIG**, *lowr'vig*: seaport town of Norway, at the head of a small fiord, which branches off from Christiania Fiord. L. has of late rapidly increased in population and prosperity. It carries on a considerable trade with foreign countries, and particularly with Britain. Very extensive iron-works—the Fritzo iron-works—are near the town. A cannon-foundry gives employment to many operatives. There are also snuff-manufactories and distilleries. The harbor is excellent, and suitable for the largest vessels. Pop. 4,944.

LAUSANNE, *lo-zân'* (Lat. *Lovsana*): city of Switzerland, cap. of the canton of Vaud, picturesquely situated on the s. slope of the Jura Mountains, close to the n. shore of the Lake of Geneva, on which the village of Ouchy forms its harbor. The two principal parts of the city are separated by a valley, across which a fine bridge has been recently thrown. L. has a number of religious, educational, and scientific institutions. The cathedral, a beautiful Gothic building, begun in the 10th c., and completed in the 13th, is the greatest ornament of the city. L. is much frequented by visitors from all parts of the world. Here Gibbon resided for many years, and the house in which he wrote the greater part of the *Decline and Fall* is still shown. John Kemble the actor is buried in a cemetery in the vicinity. Brewing, lithographing, and cotton and wool spinning are principal branches of trade. Pop. (1880) 30,179.

LAUZUN—LAVAL.

LAUZUN, *lō-zūng'*, ARMAND LOUIS DE GONTAULT, Duc DE: 1747, Apr. 15—1793, Dec. 31; b. Paris: soldier. He commanded an expedition which captured Senegal, Gambia, and other English settlements on the African coast 1779; joined Lafayette in America 1780; organized and commanded the celebrated troop of cavalry known as Lauzun's legion; took part in the siege of Yorktown and the attack on the British in New York 1781; and returned to France 1783. In 1788 he became Duc de Biron; was afterward a delegate to the States-General and secret agent of the Duc d'Orléans; was appointed commander-in-chief of the army of the Rhine 1792, July 9, and of the army on the coast of La Rochelle 1793, May 15; captured Saumur and defeated the Vendean army at Parthenay. He was condemned without a hearing as having been too lenient with the Vendéans, and put to death by order of the revolutionary tribunal on a charge of conspiracy against the republic. He was a brave soldier, but showed lack of principle.

LAVA, n. *lā'vā* [It. *lava*, a running stream or gutter, lava—from L. *lavāre*, to wash: F. *lave*]: melted rock-matter which flows from a volcano. The term is sometimes applied generally to Volcanic Rocks (q.v.), but more strictly confined to those rocks which have been poured out as a stream of molten matter from a volcanic opening, either on dry land or in shallow water. The surface of the stream, which speedily cools and hardens, is generally quite porous and vesicular, from the escape of the confined gases; but as rock is always a bad conductor of heat, the interior often remains long in a liquid condition, permitting the continued flow of the stream sometimes to a very great distance, notwithstanding its indurated covering. The end of the stream is a slowly-moving mass of loose porous blocks, rolling and tumbling over each other with a loud rattling noise, being pushed forward in fits and starts by the viscid lava, when it bursts the hardened crust and rushes on. The structure of the interior of a solid lava-stream shows a compact and homogeneous rock, assuming a more and more crystalline structure as the cooling has been the work of a longer or shorter period of time. Caverns are sometimes formed in lava-streams by the escape of the molten mass below, leaving the cooled crust standing like the roof of a tunnel.—The lava rock, or volcanic slag is sometimes melted, and made into small ornamental or useful articles.

LAVAL, *lā-vâl'*: ancient and picturesque town of France, cap. of the dept. of Mayenne, on the river Mayenne, 42 m. e. of Rennes. Its chief building is an old château, now a prison, formerly the residence of the Dukes of La Tremouille. For 500 years, this town has been noted for linen manufactures, which are exported from, as well as sold throughout France. Cottons, calicoes, serge, soap, and leather also are manufactured, and there is trade in grain, wool, timber, and iron. In

LA VALETTA—LAVAL-MONTMORENCY.

the vicinity of L. the Vendéans under Larochejaquelein gained a brilliant victory over the republicans, who lost 12,000 men and 19 cannon. Pop. (1881) 27,810.

LA VALETTA: see VALETTA, LA.

LA VALLIÈRE, *lâ râ-le-är'*, FRANÇOISE LOUISE DE LABAUME LEBLANC DE: celebrated mistress of Louis XIV. of France: 1644–1710, June 6; b. Tours; of an ancient and noble family. At an early age, she lost her father, and was brought to court by her mother, who had married a second time. She was not a great beauty, and had a slight lameness; but her amiability and winning manners, and, above all, the extraordinary sweetness and tenderness expressed in her looks, rendered her very attractive. It is seldom that one can praise more than the face of a king's mistress, but this singular creature was characterized by an extreme, almost morbid delicacy and modesty. She really loved Louis, and bore him four children, of whom two died in infancy; but though she and they received wealth and titles of honor, she remained always extremely sensible of the disgrace of their birth. When Madame de Montespan became the royal favorite, she retired into a Carmelite nunnery in Paris, where she took the veil 1674. She spent more than 30 years in penances and religious austerities. She wrote *Réflexions sur la Miséricorde de Dieu* (Paris 1680), of which a copy, dated 1688, with corrections by Bossuet, was discovered in the Louvre 1852. Both have been edited by M. Romaine Cornut (Paris 1854). A collection of her letters was published 1767.

LAVAL-MONTMORENCY, *lâ-râl'mông-mo-rông-sé'*, FRANCIS XAVIER DE: 1623, Apr. 30—1708, May 6; b. Laval, France: Rom. Cath. bp. of Canada. He was born of a noble family; resigned his right to the family title and estates in favor of a younger brother; studied theol. in Paris: and was ordained priest 1646. In 1651 he declined the bishopric of Cochîn China; 1653 became archdeacon of Evreux; and 1658, bp. of *Petræa in partibus* and vicar-apostolic of New France (Quebec). He made a tour of his vicariate; built a church in Quebec on the site of Champlain's chapel 1664; founded a seminary for the education of priests, and a preparatory college; exerted himself to prohibit the sale of liquor by the French to the Indians; and became first Rom. Cath. bp. in Canada 1670. In 1678 he founded the Seminary of the Holy Family, to supersede the seminary and college previously founded, and endowed it with all his estate. His episcopacy was harassed by conflicts of authority with the French governors and disputes with the Recollets, and though invariably sustained by the French court, these troubles combined with feeble health led him to resign 1684 and retire to his seminary.

LAVATER—LAVE.

LAVATER, Ger. *lâ-râ'tër*, F. *lâ-vâ-târ'*, **JOHANN KASPAR**: 1741, Nov. 15—1801, Jan. 2; b. Zürich; son of a physician. As a boy, he was not distinguished for talent; but 1762, while yet a youth, he gave signal proof of energy and courage in coming forward, with Henry Fuseli, to accuse the *landvoigt* Grebel of oppression and injustice, under which others had groaned without daring to complain. He early gained high reputation by a volume of poems, *Schweizerlieder* (Bern. 1767). His next publication was *Aussichten in die Ewigkeit* (3 vols. Zür. 1768-73), of which several editions were soon called for. The tone of this work is that of high religious enthusiasm, mingled with asceticism, and the resemblance to Keble has often been noted. He filled in succession several ecclesiastical offices in his native city, and finally, in 1786, became minister of the Church of St. Peter there. His powers of observation were very keen, and his discrimination of character most delicate, and believing that he could discover much of men's characters from their countenances, he concluded that physiognomy might come to be reckoned among the sciences. He labored, therefore, to form a system of physiognomy, hoping thus to promote greatly the welfare of mankind, and at last he published the work to which he owes celebrity, *Physiognomische Fragmente zur Beförderung der Menschenkenntniss und Menschenliebe* (4 vols., Leip. and Winterth. 1775-78). This work, often reprinted and translated, is written in an inflated style. It gave rise to much discussion, and occasioned not a little display of wit and humor. L. himself appears latterly to have been convinced that his system was fanciful. But he was of highly imaginative temperament, and the religious orthodoxy which he firmly retained was incongruously combined with novel speculations and with superstitious notions. He was the chosen spiritual adviser of many persons both in Switzerland and Germany, with whom he maintained an unwearied correspondence. On his tours in Germany he received extraordinary marks of popular esteem and honor. When the French Revolution began, L. hailed it with joy; but after the murder of the king, he regarded it with religious abhorrence. In performing kind offices to some wounded persons on the street at the capture of Zürich by Massena, 1799, Sep. 26, he received a wound, of the effects of which he died.

LAVAUUR, *lâ-vôr'*: town of France, dept. of Tarn, on the left bank of the Agout, 20 m. n.e. of Toulouse. It manufactures cotton-yarn, leather, and silk. Pop. 5,000.

LAVE, v. *lāv* [F. *laver*, to wash—from L. *lavārē*, to wash: It. *lavare*]: to wash; to bathe. **LA'VING**, imp. **LAVED**, pp. *lāv'd*. **LAVER**, n. *lā'vēr*, a vessel for washing. **LAVEMENT**, n. *lāv'měnt*, a washing. **LAVATORY**, n. *lāv'ā-tēr-ī* [L. *lavatōriūm*]: place for washing. **BRAZEN LAVER**, in *Scrip. hist.*, a water-basin placed in the court of the Jewish temple at which the priests washed their hands and feet.

LAVE—LAVER.

LAVE, v. *lāv* [F. *lever*, to raise—from L. *levāre*, to raise, to free from anything]: to throw up or out; to lade out.

LAVEER, v. *lā-vēr* [Dut. *laveren*]: to tack. **LAVEERING**, n. *lā-vēr'ing*, tacking.

LAVENDER, n. *lāv'ën-dër* [F. *lavande*, lavender—from It. *lavendola*, lavender; *lavanda*, a washing—from L. *lavāre*, to wash or bathe—so called from being formerly used in bathing and washing], (*Lavandula*): genus of plants of nat. ord. *Labiatae*, having the stamens and style included within the tube of the corolla, the corolla two-lipped, the upper lip bifid, the lower trifid.—The COMMON L., or NARROW-LEAVED L. (*L. vera* or *L. angustifolia*), grows wild on stony mountains and hills in s. Europe, and in more northern regions is generally cultivated in gardens. It has a delightful aromatic fragrance, and an aromatic bitter taste, and contains a great quantity of a volatile oil, *oil of lavender*. The whole plant possesses stimulant properties, and is used in medicine, but particularly the spikes of the flowers, as a tonic, stomachic, nervous stimulant, etc. L. flowers are often put into wardrobes to keep away moths. They are much used in perfumery. *Oil of L.* is procured by distillation of L. flowers with water: 70 lbs. of flowers are requisite to yield 1 lb. of oil. It is rather lighter than water, pale yellow, very fluid, and very fragrant. *Spirit of L.* is made by distilling L. flowers with rectified spirit; *L. water*, one of the most popular of all perfumes, by dissolving oil of L. with smaller quantities of other volatile oils in rectified spirit. L. is extensively cultivated for its flowers in some places near London, and particularly at Mitcham in Surrey, where more than 200 acres are occupied by it, the light and sandy soil being especially suitable.—BROAD-LEAVED L. (*L. latifolia* or *L. spica*) is a native of s. Europe, but is more tender than common lavender. It is also less fragrant, and the oil which it yields is called *Oil of Spike*, and sometimes *Foreign Oil of Lavender*. This oil is used by painters on porcelain, and in the preparation of varnishes.

L. grows well in the vicinity of Philadelphia, where a considerable quantity is raised for market. In the neighborhood of New York it is found not entirely hardy.—In the United States, *Sweet Basil* is sometimes called Lavender.

LAVER, *lā'vër*: name given to a number of kinds of sea-weed, used as food, especially *Porphyra vulgaris* and *P. laciniata*, of sub-ord. *Confervaceæ*, and nearly allied to genus *Ulva*. These plants grow on rocks and stones in the sea, and are frequent on the British shores. They consist of a very thin flat purple frond, which is not gelatinous. The frond of *P. vulgaris* is wavy and undivided, that of *P. laciniata* (sometimes called *SLOKE*) is deeply cleft, and has the segments lobed and cut at the edges. L. is stewed and brought to table as a luxury;

LAVEROCK—LAVOISIER.

also pickled and eaten with pepper, vinegar, and oil, or with lemon juice. It is regarded as useful in scrofulous affections and glandular tumors, a property which it probably owes to the iodine which it contains.—The name of GREEN L. is given to *Ulva latissima*, the frond of which is green, membranous, broad, flat, wavy, and sometimes inflated. It is bitterish, but is often used in the same way as the true L., and has similar properties.

LAVEROCK, n. *lă'vēr-ĭk*, or LAVROCK, n. *lăv'rok*, or LEV'EROCK: in *Scot.*, a Lark.

LA VILLEMARQUÉ, *lâ vĕl-mâr-kă'*, THÉODORE-CLAUDE-HENRI HERSART, Vicomte DE: Breton antiquary and Celtic scholar: b. Quimperlé, Bretagne, 1815, July 6. His first important work was a collection of popular Breton songs and melodies, 1839, with French translation and notes, under the title *Barzaz-Breiz*. Three years afterward appeared *Popular Tales of Bretagne*, to which was prefixed a dissertation on the story of the Round Table. His next work was a collection of the poems of the Celtic bards of the 6th c., with French translation, and explanatory and critical notes (1850): This made him widely known. La V. has since published Celtic Legends (*La Légende Celtique*) of Ireland, Cambria, and Bretagne, which contain such of the original texts—Irish, Welsh, or Breton—as are rare or unpublished. Among his publications are a *Breton Grammar*, a *Breton and French Dictionary*, *Bretagne Ancient and Modern*, and *The Great Mystery of Jesus*, with a dissertation on the dramatic literature of the Celts.

LAVISH, a. *lăv'ish* [OF. *lavasse* or *lavace*, an inundation, shower: comp. OE. *lave*, to pour out]: profuse of anything; prodigal; wasteful: V. to expend or bestow with profusion; to waste; to squander. LAV'ISHING, imp. LAV'ISHED, pp. *-isht*. LAV'ISHER, n. *-ēr*, one who. LAV'ISHLY, ad. *-lĭ*. LAV'ISHMENT, n. *-mĕnt*, profuse expenditure; prodigality. LAV'ISHNESS, n. *-nĕs*, profusion; prodigality. LAVISH PERSONS, see INTERDICTION.—SYN. of 'lavish, a.': profuse; extravagant; immoderate; exuberant; unrestrained.

LAVOISIER, *lâ-vvâ-ze-ă'*, ANTOINE LAURENT: 1743, Aug. 26—1794, May 6; b. Paris: founder of the antiphlogistic or modern chemistry. To obtain the means of more fully prosecuting chemical studies he accepted, 1769, the office of farmer-general. In 1768, he was made an academician; 1776, discovered a way of greatly improving the quality of gunpowder; and made other beneficial discoveries in economics, and in the application of chemistry to agriculture. Availing himself of the discoveries of Black, Priestly, and Cavendish, and making many experiments and discoveries himself, he was led to connect the recently-discovered gas, oxygen, with the phenomena of combustion and of acidity; and 1783, he proved that water can be formed by burning oxygen and hydrogen together, and that it can be decomposed into

LAVOLT—LAW.

the same elements. He and his associates invented a new chemical nomenclature, adapted to the advanced state of the science, which was very generally adopted: see CHEMISTRY: CHEMICAL NOMENCLATURE. L.'s services to science could not save him during the Reign of Terror from the popular rage against farmers of the taxes, and he, with 27 others of the same profession, died by the guillotine, 1794. His principal work is his *Traité Élémentaire de Chimie*; but of course his chemical works are now interesting merely as marking the history of the science.

LAVOLT, *lä-völt'*, or LAVOLTA, n. *lä-völtä* [It. *la*, the; *volta*, a turning, a whirling round]: in OE., a dance; a kind of waltz in which there was much turning followed by a bound or spring.

LAW, n. *law* [Icel. *lag*, plu. *lög*, order, custom, law—from *leggja*, to lay; AS. *lagu*, what is laid or fixed, a law: Swed. *lag*; Dan. *lov*, law: comp. Gael. *lagh*, order, method—*lit.*, that which lies or is in due order]: that which is laid down or imposed by God or a government; a rule or command of the sovereign power in a state, published in writing, and addressed to and enforced upon the members of such state; a statute: see LAW (established rule): a rule of direction; a settled principle; a rule or axiom of science. LAWFUL, a. *law'fûl*, conformable to law; allowed by law; legal. LAWFULLY, ad. *-lî*. LAWFULNESS, n. *-nês*, the quality of being conformable to law. LAW'GIVER, one who makes laws; a legislator. LAW'LESS, a. *-lës*, not subject to law; unrestrained by law; contrary to law, as a lawless proceeding. LAW'LESSLY, ad. *-lî*. LAW'LESSNESS, n. *-nês*, the state or quality of being lawless. LAW-SUIT, n. *law'sût* [*law*, and *suit*]: a process in law; a litigation. LAW'YER, n. *-yër* [*law*, and AS. *wer*, a man]: one skilled in law; a solicitor or attorney. In the United Kingdom, Lawyer is not a technical term of law, but a popular name given to those who are either practitioners of the law or intimately connected with its administration. In Great Britain and Ireland, lawyers are subdivided into two classes: see ATTORNEYS AND SOLICITORS, BARRISTER: ADVOCATE. In the United States, an attorney acts as counsel, and *vice versâ*, there being no similar subdivision of the profession; and the expediency of the subdivision has often been canvassed in the United Kingdom of late years. LAW-BREAKER, one who violates the law. LAW-MAKER, one who enacts laws; a legislator. BY-LAWS, or BYE-LAWS, laws for regulating the affairs of a society or corporation in addition to the principal or the ordinary laws. CANON LAW, ecclesiastical law (see CANON LAW. CEREMONIAL LAW, the rites and ceremonies instituted by Moses. CIVIL LAW, the written laws which regulate the ordinary rights and duties of men: applied by eminence to the old 'Roman or Civil Law': see LAW (established rule). CLUB LAW, government by violence, or by the use of arms; anarchy. COMMERCIAL LAW,

LAW.

the rules or usages which regulate the intercourse between merchants and traders (see *MERCANTILE LAW*). *COMMON LAW*, the unwritten law of a country, or that established by old usage: see *LAW* (established rule). *CRIMINAL LAW*, the laws that regulate the nature and punishment of crimes against person or property (see *CRIMINAL LAW*). *ECCLESIASTICAL LAW*, laws or rules prescribed for the government of a church. *INTERNATIONAL LAW*, the laws which regulate the intercourse between nations (see *INTERNATIONAL LAW*). *LYNCH LAW*, see *LYNCH*. *MARITIME LAW*, the law of the sea; a branch of the *commercial law*. *MARTIAL LAW*, rules for the government of an army; summary laws superseding the ordinary law of a country in a disturbed or rebellious district, and administered by the military authorities. *MORAL LAW*, the laws which lay down to men their duties to God and to each other—applied particularly to the Ten Commandments (see *LAW*, in *Theology*). *MOSAIC* or *JEWISH LAW*, that given by Moses, contained in the first five books of the Old Test. Scrip. *MUNICIPAL LAW*, the ordinary law of a country, regulating the civil conduct and affairs of its people; applicable especially in towns, cities, etc. (see *MUNICIPAL LAW*). *NATIONAL LAW*, the laws which govern a nation or state. *PHYSICAL LAWS*, or *LAWS OF NATURE*, the properties, actions, tendencies, etc., impressed by the Creator on animals, vegetables, and matter generally, in all their varied conditions and forms; established methods of the activity of force: hence, properly, nature is said to be governed not *by* laws but *through* laws. *REVEALED LAWS*, the laws recorded in the Bible for the guidance and rule of all mankind. *STATUTE LAW*, a law or rule enacted by the legislative power, and recorded in writing. *THE LAW*, a body or system of rules of conduct or action (see *LAW* (established rule)): the whole body of the Jewish laws and doctrines contained in the Old Test. Scrip., as opposed to the *Gospel*; the books of the Jewish laws and religion as opposed to the *prophets* (see *LAW*, in *Theology*). *LAW LATIN*, the corrupt Latin in law and in legal documents: see *LATIN*. *LAW OF NATIONS*, see *INTERNATIONAL LAW*.—*SYN.* of 'law': decree; edict; proclamation; regulation; justice; equity;—of 'lawful': legitimate; rightful; constitutional; allowable; regular.

LAW, n. *law* [*AS.* *hlæw* or *hlaw*, a heap, a small hill; Goth. *hlaiw*, a grave, a tomb]: in *Scot.*, any round-topped hill standing out boldly from those around it; also called a *LOWE*, especially in Derbyshire.

LAW: established rule; enactment by sovereign power. It has been variously defined. Blackstone says it means the rules of human action or conduct. This definition is too wide, if the reference be to law as a rule of civil government, for in that sense, law is confined to such rules as courts, supported by proper authority, will enforce. The law of nature consists of those laws which

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are common to all mankind, and are supposed to be, as nearly as can be conjectured, independent of the accidents of time and place. The civil or municipal law of a nation is what is commonly understood by the term law, when applied to a particular country. The 'Civil Law' denotes *par excellence* the old Roman Law as embodied in the *Institutes* of Justinian, the Code, and other parts of what is commonly called *Corpus Juris Civilis*, see CODE: JUSTINIAN (*Codex Justinianus*): EDICT: PANDICTS. Many of the leading doctrines of that law have been adopted by modern nations. England is the civilized country which has adopted the least from that code of law, while Scotland follows the continental nations in adopting the Roman or Civil Law to a large extent, and on many subjects in adopting it entirely. The law of nations is subdivided into public International Law (q.v.) and private international law, or the *comitas gentium*. Law is used in England often as contradistinguished from equity, but this is due chiefly to the accidental circumstance, that there is a subdivision of courts into courts of law and equity, according to the nature of the remedy given. See JURISPRUDENCE: INTERNATIONAL LAW: CHANCERY: also references below. Law is also often in popular parlance distinguished from justice, the latter being supposed to be perfect in its nature, or as near the standard of perfection as can be supposed; whereas there are numberless cases of injury, hardship, and oppression, which, owing to human infirmity, no system of human laws can adequately redress; and this is often adduced as confirmation of the doctrine of future rewards and punishments. Law is also sometimes subdivided into criminal law, constitutional law, etc., according to the particular subject-matter.—See EQUITY, COURTS OF: EQUITY, PRINCIPLES OF: COMMON LAW: COMMON LAW, COURTS OF. See also ADMIRALTY JURISDICTION: MERCANTILE LAW: CANON LAW: COURTS OF JUSTICE (References): CRIMINAL LAW (References): STATUTES.

LAW, in Theology: term variously used. In the Bible, it often includes the whole of revelation, doctrinal as well as preceptive; but it is often used, in a more restricted and somewhat conventional sense, to signify the books of Moses—the whole Jewish Scriptures being comprehended under the twofold designation 'the law and the prophets.' A very natural and common use of the term law is to denote the preceptive part of revelation, in contradistinction to the doctrinal, one being designated as *the law*, and the other as *the gospel*. When employed in Scripture with exclusive reference to the preceptive part of revelation, the term law signifies sometimes the Jewish code of precepts as to rites and ceremonies, called by theologians the CEREMONIAL LAW, and which is regarded as having been abrogated when the Jewish dispensation gave place to the Christian. The ceremonial law is also regarded as having in its

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rites and ceremonies—‘a shadow of good things to come’—symbolized the great facts which form the system of Christianity.—The MORAL LAW is that preceptive revelation of the will of God which is of perpetual and universal obligation: it is commonly regarded by theologians as summed up in the *Ten Commandments*; and, according to Christ’s own statement, as still more briefly and comprehensively summed up in the two commandments of loving God with all our heart, and soul, and strength, and mind, and loving our neighbors as ourselves. Although the Ten Commandments were given to the Jews at Mount Sinai, it is not therefore held that they were intended for the Jews alone, or were then first promulgated; the moral law being regarded as really the *law of nature*, written on the heart of man at his creation, though to man fallen into ungodliness, therefore into moral blindness, a clear and express revelation of it has become necessary. One of the contested points in connection with this subject is that of the Sabbath (q.v.). Another relates to the law of nature, and the value which ought to be practically assigned to the decisions of the judgment and conscience of man, apart from express revelation.—The obligation of the moral law on the consciences of Christians is admitted by all except Antinomians (q.v.).

LAW, CANON: see CANON LAW.

LAW, EDWARD, Lord ELLENBOROUGH: see ELLENBOROUGH, Earl of.

LAW, FEUDAL: see FEUDAL SYSTEM.

LAW, FOREIGN: see FOREIGN COURTS.

LAW, JOHN: comptroller-general of the finances of France, and famous for his credit operations during the minority of Louis XV.: 1671, Apr. 21—1729, Mar. 21; b. Edinburgh; son of a goldsmith and banker, proprietor of the estate of Lauriston, near Edinburgh. L. early showed a remarkable talent for arithmetic, algebra, and kindred studies. After the death of his father, he removed to London, where he was admitted into the first circles of fashion, but was soon compelled to flee, in consequence of killing his adversary in a duel resulting from a love-intrigue. He went to Amsterdam, and spent his time in studying the credit operations of the bank. About 1700 he returned to Edinburgh, a zealous advocate of a paper currency; but his proposals to the Scottish parliament on this subject met an unfavorable reception. He now visited different parts of the continent, where he accumulated a fortune by gambling, but sought in vain to win the favor of governments to his banking schemes. At last, he settled in Paris, and in company with his brother William, set up, 1716, a private bank, which was soon successful and prosperous to such an extraordinary degree that the Duke of Orleans, the regent, adopted tentatively, 1718, L.’s plan of a national bank, and issued prodigious quantities of bank-notes,

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which circulated with perfect credit, while the ordinary national bonds remained, as they had long been, at a price far below their nominal value. The finances of France were in a frightful condition, through the extravagance of Louis XIV., who had died not long before; and the perplexed regent, impressed by the success of L.'s bank as a method of public financial relief, granted a governmental approbation and establishment of L.'s great *Mississippi Scheme* (q.v.), 1719, and L. was soon made a councilor of state and comptroller-general of finances; but on the failure of his scheme, and the insolvency of the national bank, he resigned the latter office, and thought it prudent to quit France 1720, Dec. He went first to Brussels, but finally settled in Venice, where he managed to eke out a wretched living by gambling; and there he died. A complete ed. of his works was published, Paris, 1790; another 1843.

LAW, RICHARD, LL.D.: lawyer: 1733, Mar. 17—1806, Jan. 26; b. Milford, Conn.: son of Gov. Jonathan L. He graduated at Yale College 1751, was admitted to the bar 1754, and settled in New London to practice, soon afterward becoming co. court judge. In 1776-86 he was a member of the council, and 1777-8 and 81-4 a delegate to congress. He was associated subsequently with Roger Sherman in revising and codifying the statute laws of Conn.; was mayor of New London 1784-1806; appointed judge of the Conn. supreme court 1784, and chief justice 1786; and was U.S. dist. judge for Conn. 1789-1806. He received the degree LL.D. from Yale 1802.

LAW, ROMAN OR CIVIL: see LAW (established rule): also various titles there referred to.

LAW, WILLIAM: notable religious, controversial, practical, and mystic writer: 1686-1761, Apr. 9; b. Kingscliffe, Northamptonshire, England. He was educated at Emmanuel College, Cambridge, where he received holy orders 1711, and took his degree M.A. 1712. At the accession of George I., L. refused to take the oath of allegiance, holding firmly to the Stuart succession, and became a non-juror, losing his official perquisites. He was for some time tutor to Edward Gibbon, father of the historian, who speaks of his piety and talents with unusual warmth. Afterward his abode became the resort of men like the Wesleys, Dr. Cheyne, and Archibald Hutcheson, M.P., who sought L.'s instruction and guidance in a higher and more spiritual Christian life. About 1740, two of his friends, Miss Hester Gibbon, sister of his pupil, and the widow of Mr. Hutcheson, having resolved to retire from the world, and devote themselves to works of charity and a religious life, chose L. for their almoner and instructor. The ladies settled at Kingscliffe, where L.'s father had left him a small estate; and where, after 21 years of a most exemplary and devout life, he died. L.'s writings are deeply tinged with mysticism of the best type. His principle work is his *Serious Call to a*

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Devout and Holy Life (1729), a treatise that first awakened the religious sensibilities of Dr. Johnson, who speaks of it in high terms, and from which the brothers Wesley also derived much advantage. Next to the *Serious Call*, his most important works are his Answer to Mandeville's *Fable of the Bees*, a true gem for its style, wit, and argument (published 1724; republished, with introduction by the Rev. F. D. Maurice, 1844), his Letters to the Bishop of Bangor, *The Way to Knowledge*, and *The Spirit of Love*. His collected works were published, 9 vols., 1762. See Overton's *L.*, *Nonjuror and Mystic* (1881).

LAWBURROWS, n. plu. *law-būr'rōz* [*law*, and AS. *borg* or *borh*, a pledge]: in *Scotch law*, a process by which one person compels another, from whom he apprehends violence, to find security to keep the peace. Letters of L. in Scotland correspond to what are called Articles of the Peace (q.v.) in England and Ireland.

LAWIN, n. *law'in* [Gael. *lach* or *lathan*, a reckoning, the price of the drink]: in *Scot.*, the reckoning at an inn or tavern.

LAW-MERCHANT: name often used in law to denote the customs which have grown up among merchants in reference to mercantile documents and business, such as bills of exchange, bills of lading, etc. These customs become incorporated with, and form part of, the common law, and are binding as such: see **MERCANTILE LAW**.

LAWN, n. *lawn* [W. *llan*, an open clear place: Gael. *lann*, an inclosure: prov. Dan. *laane*, a bare place in a field: Fris. *lona*, a narrow way between gardens and houses: OF. *lande*, a wild, shrubby or bushy plain (see **LANE**)]: an open grassy space in a wood; a small grassy plain in front of or around a house. **LAWNY**, a. *lawn'i*, level like a lawn; smooth; grassy.

LAWN, n. *lawn* [Sp. *lona*, an open transparent texture, canvas: L. *lana*, wool]: a kind of very fine linen: ADJ. made of lawn. **LAWN-SLEEVE**, a sleeve made of lawn; part of a bishop's official dress. *Note.*—**LAWN** may be a corruption of F. *linon*, lawn—from *lin*, flax, linen.

LAWN: ornamental grass plot. If well-kept it has a singular beauty. Land for a L. should be graded, unless it is nearly level; but gentle undulations are not objectionable. If the land is wet, underdraining will be required. Deep plowing and thorough pulverization are necessary, and a liberal quantity of well-rotted manure, wood-ashes, or commercial fertilizer should be thoroughly mixed with the soil. If immediate results are desired, turf can be cut from a rich field and placed upon land prepared as described, but a L. produced by seed-ing will be likely to prove more satisfactory. Mixtures

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of seeds for the L., some containing as many as 16 varieties, are for sale at seed stores. Though much more costly, these mixtures seldom give better results than the use of only two or three kinds. On rich soils Kentucky Blue Grass (*Poa pratensis*) is very desirable; while for lighter land, Redtop (*Agrostis vulgaris*) is one of the best varieties. The addition of a moderate quantity of White Clover (*Trifolium repens*), to either of the above named varieties is highly advantageous. On account of its fragrance when drying, as well as its early growth in spring, the Sweet Scented Vernal Grass (*Anthoxanthum odoratum*) also is useful. To form a close sod, seeding should be very heavy, at the rate of from two to four bushels per acre. Sowing should be done early in the season, and the land thoroughly rolled. The fertility of the L. must be maintained by the use of fertilizers or manure each year. The former can be used in spring: manure should be finely pulverized and applied in autumn. In order to allow development of the grass roots, the mowing should not be commenced in spring until considerable growth has been made. During summer the grass may be cut weekly, but cutting late in autumn should be avoided.

LAWN-TENNIS: popular out-door game, played with balls and rackets on a 'court' of turf, hard-rolled ground, or asphalt; adapted from the old English game of tennis and its modern modification, racket. The 'court' or ground required for the game is usually 78 ft. long by 27 ft. wide, and is divided in the centre by a net attached to upright stakes driven into the ground, 3 ft. outside the court line on each side. This net is $3\frac{1}{2}$ ft. high at the posts, and 3 ft. in the centre. Parallel with the net and at each end of the court, base lines are drawn, and connected by side lines, the whole figure having a parallelogram form. Where the court is laid out on asphalt or other patent surface, the side, base, service, and half-court lines are painted white. Half-court lines are drawn midway between the side lines, and service lines on each side the net, parallel with it and 21 ft. from it. The balls average $2\frac{1}{2}$ in. in diameter, and 2 oz. in weight; the rackets are made of ash (frame), spanish cedar (handle), and black walnut (throat), with gut strung over and under, making a stiff mesh; the approved weight of the racket is 13— $14\frac{1}{2}$ oz. There are 6 racket factories in the United States, 4 in Pawtucket, R. I., and 2 in Mass. For 3-handed and 4-handed games the court is widened to 30 ft., and the service side lines are drawn $4\frac{1}{2}$ ft. inside the side lines and parallel with them. Before beginning to play, the parties choose sides (unless in club-matches) and decide the right to serve, then take places on opposite sides of the net. The player who first delivers the ball is called the *server*; the other the *striker-out*. After each game the server and striker-out change places, alternating to the close of the set. The player who first wins 6 games, wins the set. If both play-

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ers win 5 games, the score is *games all*, and the next game won by either is scored *advantage game* for the winner; a player must win the two games immediately following the score of *games all* to win the set. In a series of sets the server in the last game of one set becomes the striker-out in the first game of the succeeding set. When at play the server stands with one foot outside of the base line and the other on or in a perpendicular line above it; delivers the ball from the right to the left courts, beginning from the right, alternately; and the ball must drop between the service line, half court line, and side line of the court, diagonally opposite to the side of delivery. If the ball drop elsewhere or touches the server's partner or anything that he wears or carries, it is a *fault*; and after a fault the server shall again serve from the same court unless the fault was caused by service from the wrong court. A ball is in *play* the moment it leaves the server's racket, excepting when it drops into the net, or goes beyond the service line, out of court, or in the wrong court. A service is *volleyed* when the ball is taken on the racket before it has touched the ground; and a *return* is the taking of the ball on the racket after its rebound and throwing it across the net to the diagonally opposite court. A return may be good even if the ball touches the net, but an otherwise good service counts for nothing if the net is struck. A *let* is an accidental obstruction. The server wins a stroke if the striker-out volleys the ball or fails to return it, or returns it in play so that it drops outside his opponent's court; the striker-out wins a stroke if the server serve two consecutive faults, fails to return the ball in play, or returns it so that it drops outside of his opponent's court; and either player loses a stroke if in returning the ball in play it touches a post of the net, his person, or anything he wears or carries, excepting the racket in the act of striking, or is struck by the racket more than once, or if the player touch the net or any of its supports while in play, or if he volleys the ball before it has passed the net. The first stroke scores a player 15, the second 30, the third 40, and the fourth scores *game*, excepting as before noted and when both players have won 3 strokes. In the latter case the score is a *deuce*, and the winner of the next stroke scores an *advantage*. If the same winner gains the next stroke, he wins the game; if he loses the stroke his score goes back to deuce. The winner must win two strokes immediately after scoring deuce to win the game. In a 3-handed game the odd player serves in each alternate game, as the odd player in 3-handed euchre plays every other hand and scores with the winner. Beside alternating as server and striker-out, the players change sides at the end of every set. The game has attained wide popularity in the United States, and has its state and national associations, fixed rules, male and female champions, and literature.

LAW OF NATIONS: see INTERNATIONAL LAW.

LAWRANCE—LAWRENCE.

LAWRANCE, *law'ranss*, JOHN: 1750-1810, Nov. 10; b. Cornwall, England: lawyer. He removed to New York 1767; was admitted to the bar 1772; appointed an aide to Washington 1777; presided as judge-advocate-gen. at the trial of Maj. John André; was member of congress 1785, 6, 89-93, U. S. dist. judge for N. Y. 1794-96, U. S. senator 1796-1800; and pres. of the senate 1798.

LAWRENCE, *law'renss*: city, cap. of Douglas co., Kan., on the Kansas river, and at junction of Union Pacific and the Kansas City Lawrence and Southern Kansas railroads; 29 m. e. by s. of Topeka, 34 m. s.s.w. of Leavenworth, 38 m. w. by s. of Kansas City. It is on both sides the river, 70 m. above its mouth, the parts being connected by two bridges, and has fine water power for its manufactories, secured by a dam here built across the river. L. is the seat of the State Univ. and the State Imbecile Asylum; has 18 churches, public library, 3 national banks (cap. \$350,000), 1 state bank (cap. \$50,000), and several daily and weekly newspapers, has railroad connections with 6 different lines; and contains the largest pork-packing establishment in the state, one of the largest barb-wire factories in the west, paper and flour mills, iron foundries, machine shops, shirt factory, and straw-lumber factory. L. was settled 1854 by friends of free labor under the auspices of the Mass. Aid Soc., and was the headquarters of the anti-slavery leaders 1854-60 (see KANSAS); and 1863, Aug. 21, was attacked by Quantrell and his guerrillas, when 150 persons were killed and many buildings burned. Pop. (1870) 8,320; (1880) 8,510; (1885) 10,625.

LAWRENCE: city: one of the caps. of Essex co., Mass., on both sides the Merrimack river, and on the Boston and Maine, Boston and Lowell, Lowell and L., and Manchester and L. railroads: 10 m. n.e. of Lowell, 26 m. n.w. of Boston. It contains a court house, city hall, co. prison, city jail, public library, music hall, opera house, Odd Fellows and Masonic temples, city hospital, Rom. Cath. hospital, convent, protectory, and Augustinian house, beautiful common of 17 acres, 3 public parks, 26 churches, 63 graded public schools, high and grammar schools, 5 national banks (cap. \$1,075,000), 3 savings banks, and 2 daily and 5 weekly newspapers. The two parts of the city are connected by 4 bridges across the river, and the n. part is connected with south L. by a street railway extending from Methuen to N. Andover. L. has excellent drainage, model waterworks, efficient fire dept., and gas and electric light plants. The great value of L. as a manufacturing centre has been reached by the improvement of the river that bisects it. The Merrimack has an average width of 1,000 feet here, and a descent in $\frac{1}{2}$ m. of 26 ft. over a rocky bed. In 1845 Amos and Abbott Lawrence (q.v.), Nathan Appleton, and other capitalists secured control of a large tract of land on both sides the river, and organized a company to develop the natural water-power of the locality. The

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company constructed a dam of solid granite across the river at a cost of \$250,000, the structure being 1,629 ft. long, 35 ft. thick at the base, 12 ft. thick at the crown, and 40½ ft. high in midstream. A distributing canal, 1 m. long, 12 ft. deep, 100 ft. wide at the head, and 60 ft. wide at the mouth was built on the n. side of the river at a cost, with locks, of \$200,000. 1848, Feb. 24, water from this canal set the first mill-wheel in motion, and started the distinctive industry of the city. Subsequently the company built a similar canal on the s. side of the river.

In 1880 L. had 229 manufacturing establishments, using a capital of \$18,698,977, employing 16,719 hands, paying in wages \$5,544,513, and yielding products valued at \$25,058,246. The principal establishments are the Atlantic cotton mills (incorporated 1846: sheetings and shirtings), cap. \$1,000,000, looms 1,800, operatives 1,200; Pacific mills (1853: calicos, shirtings, delaines, alpacas, serges, worsted dress goods), cap. \$2,500,000, operatives 5,500; Washington mills (1858: cambrics, shawls, broadcloth, doeskins, woolen goods), cap. \$1,650,000, looms 1,400, operatives, 3,000; Arlington mills (1865: woolen goods), cap. \$1,000,000, operatives 2,400; Everett mills (1860: cotton, cassimeres, gingham, poplins, trowsers goods, and dress goods), cap. \$800,000, looms, 1,000, operatives 950; Pemberton mills (1860), cap. \$450,000, looms 825, operatives 775; L. mills (1853: duckings), cap. \$300,000; L. mills (1863: woolen goods), cap. \$150,000; and the Russell, Merrimack, and Bacon paper mills. The average aggregate production of the cotton and woolen mills is 6,800,000 yards per week. The buildings all are large and very substantial. Beside these industries there are numerous manufactories of carriages, flour, hardware, and machinery, which with the mills give employment to about 18,000 persons.

The former village of Merrimack was incorporated as a town and named L. after the Lawrence brothers 1847, and received a city charter 1853. It was visited by a terrible calamity 1860, Jan. 10, when without warning the brick main building of the original Pemberton mills collapsed, burying 700 operatives in the ruins, causing the death of 91 in the fall and the subsequent fire, and variously injuring 134 others. Pop. (1870) 28,921; (1880) 39,151; (1885) 38,845.

LAWRENCE, ABBOTT, LL.D.: merchant: 1792, Dec. 16—1865, Aug. 18; b. Groton, Mass; son of SAMUEL L., founder of Groton Academy. He received an academical education, was apprenticed to his brother AMOS L. 1808, and became a partner in the mercantile firm of A. & A. L., 1814. For a number of years the brothers engaged in selling cotton and woolen goods on commission, then entered the import trade, became agents for the Lowell manufacturing corporations, began manufacturing, and were conspicuous in the founding of the city of Lawrence. L. was a member of congress 1835-37, 39-41; U. S. commissioner for settlement of the n.e. boundary

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(Aroostook) question, and negotiated a mutually satisfactory arrangement with Lord Ashburton 1842; and U. S. minister to Great Britain 1849-52. He was offered and declined the offices of sec. of the navy and sec. of the interior dept. 1849; founded the Scientific School of Harvard Univ. by a gift of \$100,000, established a number of scholarships and public school prizes; left \$50,000 for the erection of model dwellings in Groton; and received the degree of LL.D. from Harvard 1854.

LAWRENCE, Amos: merchant: 1786, Apr. 22—1852, Dec. 31: b. Groton, Mass.; brother of ABBOTT L. He was educated in Groton (now Lawrence) Acad.; learned the dry goods business; established himself as a merchant in Boston 1807; and with his brother, carried on large business operations till ill health compelled his retirement from the firm 1831. He passed the remainder of his life in works of beneficence; gave \$639,000 for charitable purposes 1829-52; established and maintained for some time a child's dispensary in Boston; contributed \$10,000 toward the completion of the Bunker Hill monument; and was equally generous in private benefactions.

LAWRENCE, Sir HENRY MONTGOMERY: 1806, June 28—1857, July 4; b. Matura, Ceylon; elder bro. of Baron John Laird-Mair L. He was one of the greatest military statesman of India, chief commissioner of Lucknow, and virtually gov. of Oude when the Indian mutiny broke out. While in command of the handful of heroic men who defended the women and children in the Residency of Lucknow, Sir Henry was wounded by the explosion of a shell, and died. He was the founder of the Lawrence Asylum, for the reception of the children of European soldiers in India. He was author of valuable papers on army reform. A monument to his memory is in St. Paul's Cathedral.

LAWRENCE, JAMES: 1781, Oct. 1—1813, June 6; b. Burlington, N. J.: naval officer. He entered the U. S. navy as midshipman 1798, was promoted acting lieut. 1800, lieut. 1802, master-commandant 1810, and capt. 1811, took part in the war with Tripoli 1804-5, and distinguished himself in the destruction of the captured U. S. frigate *Philadelphia* under the guns of Tripoli Castle; was attached to the S. American squadron 1812; commanded the *Hornet*, and captured the British sloop of war *Peacock*, which sunk with several of his and her own crew after surrendering, off Demerara 1813, Feb. 24; returned to America with his prisoners, and received a gold medal from congress for his victory over the *Peacock*; and in May was appointed commander of the U. S. frigate *Chesapeake*, then lying in Boston harbor. Two days after taking command of the frigate and discovering that she had a raw, undisciplined crew, he was challenged by Capt. Broke of the British frigate *Shannon* to a deep water fight. 1813, June 1, he sailed out of the har-

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bor 30 m., caught up with the *Shannon*, and immediately went into action. Within a few minutes the *Chesapeake* fouled the *Shannon*, and a broadside from the latter mortally wounded L. and killed or wounded nearly every one on the *Chesapeake's* deck. As L. was being carried below, he gave his crew the memorable parting injunction, 'Don't give up the ship.' The *Chesapeake's* crew became panic-stricken, and the vessel's capture was easily accomplished. Both vessels were taken to Halifax, where L. died. On the return of his remains to the United States, public honors were paid them in Salem, Mass., and they were buried in Trinity church-yard, New York. His naval uniform and sword are in the library of the N. J. Hist. Society.

LAWRENCE, Baron the Right Honorable JOHN LAIRD-MAIR: Viceroy and Governor-General of India: 1811, Mar. 24—1879, June 27; b. Richmond, Yorkshire; younger son of lieut.col. Alexander L., who served in the Mysore campaign and at the capture of Seringapatam. He obtained, 1827, a presentation to Haileybury College, where he carried off the chief prizes. His first years in the Indian civil service were spent in Delhi and vicinity. On the annexation of the Punjab, L. was appointed commissioner, and afterward lieut.gov. of the Punjab. When the Indian mutiny broke out, he proved the mainstay of the British dominion in India. The formerly restless Sikhs had become so attached to his firm and beneficent rule, that L. was enabled to send troops to the relief of Delhi and other exposed points. So timely was this succor, and so great was his foresight, that he was styled 'the savior of India.' On his return to England, he received the thanks of parliament, with the grant of a pension £1,000 a year. He was made baronet 1858, a privy-councilor 1859. In 1861, L. was nominated one of the knights of the 'Star of India.' In 1863, he succeeded the late Lord Elgin as gov.gen. of India; he was made a member of the Indian council, and the court of directors of the E. India Company granted him a life pension of £2,000 a year. In 1869, he was raised to the house of peers. Lord L. was chairman of the London school-board 1870-73. See his *Life* by Bosworth Smith (1883).

LAWRENCE (LAURENTIUS), SAINT, the Deacon: one of the most celebrated martyrs of the early church, subject of many ancient panegyrics, and of one of the most elaborate of the hymns of Prudentius. According to the later and more full accounts, he was one of the deacons of Rome, in the pontificate of Sixtus II. (3d c.), and as such was especially charged with the care of the poor, and the orphans and widows, and with stewardship of the sacred treasures of the church. In the persecution of Valerian, being summoned, according to the legend, before the pretor as a Christian, and being called on to deliver up the treasures of the church, he

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mockingly produced the poor and the sick of his charge, declaring that 'those were his treasures;' and on his persisting in his refusal to sacrifice to the gods, being condemned to be roasted on a gridiron, he continued throughout his tortures to mock his persecutors. Many of the details of his martyrdom are probably due to the imagination of the poetical narrator; but the martyrdom is unquestionably historical, and its probable date was 258. His feast is celebrated Aug. 10.

LAWRENCE, Sir THOMAS, President of the Royal Academy: 1769, May 4—1830, Jan. 7; b. Bristol; son of an inn-keeper. At the early age of 10 years he entered on the profession of a portrait-painter in crayons, at Oxford, where he immediately obtained full employment. There is an engraving which bears to have been 'directed by I. K. Sherwin,' celebrated engraver, of a portrait of the young artist; it is dedicated in the following terms: 'To the nobility and gentry in general, and the University of Oxford in particular, who have so liberally countenanced his pencil, this portrait of Master Lawrence is inscribed by their most devoted and most grateful servant, T. Lawrence, senior.' It was published by Lawrence, senior, at Bath, 1783, June 18, with a print of Mrs. Siddons in the character of Zara, drawn by Master L., and engraved by J. R. Smith. The young artist next wrought in his profession at Bath, where he had great success; and at the age of 18, settled in London, and entered as a student of the Royal Acad., having a year previously taken to painting in oil. His success was extraordinary; in 1791, before he attained the age required by the laws of the Acad., he was elected a supplemental associate by desire of the king; on Reynolds's death a year afterward, was appointed limner to his majesty; was made a royal academician 1798; knighted 1815; and on Benjamin West's death 1826, succeeded him as pres. of the Royal Acad. He died in London. L. was the favorite portrait-painter of the time, had an immense practice, and obtained larger prices for his works than were ever paid to any previous portrait-painter. His artistic talent was doubtless overrated during his life, but justice has scarcely been done to it of late years; for his style, though in many respects meretricious, was greatly influenced by the fashion and dress of the period, and in time to come, impressions of the principal characters who figured during the Regency, and in the reign of George IV., will be taken mainly from his works. His portraits in the Waterloo Gallery at Windsor are of the greatest historical value. He had dexterous touch, and an agreeable conventional grace of style. He was a man of great urbanity and fine taste, and left a most valuable collection of drawings by the old masters, now unfortunately scattered. See *Life and Correspondence of Sir T. Lawrence*, by Williams (1831); and Cunningham's *Lives of British Painters* (1833).

LAWRENCE—LAW-TERMS.

LAWRENCE, Sir WILLIAM: 1783, July—1867, July 5; b. Cirencester, England: distinguished surgeon. In 1800 he was apprenticed in London to Mr. Abernethy, by whom he was soon appointed demonstrator in anatomy to Bartholomew's Hospital. In 1813 he was made surgeon to the hospital, and was chosen fellow of the Royal Soc.; and after holding various important surgical appointments, he became 1815 one of the professors of anatomy to the Royal College of Surgeons. In 1828-9, he succeeded his teacher, Mr. Abernethy, as lecturer on surgery to St. Bartholomew's. From this period, L. was active in the great questions of reform, which divided the medical world as much as the political, and was alternately an advocate and an opponent of innovation. He succeeded Sir Benjamin Brodie as sergeant-surgeon to the queen, on which occasion he received his baronetcy. He died of paralysis, in Whitehall. His writings are very numerous: the most important for his reputation and for the profession are *A Treatise on the Venereal Diseases of the Eye*, and *The Treatment of Hernia*.

LAWRENCEBURG: city, cap. of Dearborn co., Ind.; on the Ohio river, Whitewater canal, and the Ohio and Mississippi and the Cincinnati Indianapolis St. Louis and Chicago railroads; 20 m. below Cincinnati, 90 m. e. s.e. of Indianapolis. It contains 7 churches, high and graded schools, Rom. Cath. acad., 3 distilleries, 2 breweries, 1 national bank (cap. \$110,000), and manufactories of lumber, furniture, flour, stoves, and pumps. Henry Ward Beecher's first pastorate was here. Pop. (1870) 3,159; (1880) 4,668.

LAWRENCE, ST., GULF OF: see ST. LAWRENCE, GULF OF.

LAWRENCE, ST., RIVER: see ST. LAWRENCE RIVER.

LAWRENCE SCIENTIFIC SCHOOL: see HARVARD UNIVERSITY.

LAWSUIT, LAWYER: see under LAW 1.

LAW-TERMS: usually, in England and Ireland, those periods of the year during which the law-courts sit in banc or in full court to dispose of business. These are of ancient origin, and are now fixed by statute as follows: Hilary term begins Jan. 11, ends Jan. 31; Easter term begins Apr. 15, ends May 8; Trinity term begins May 22, ends June 12; Michaelmas term begins Nov. 2, ends Nov. 25. Though the courts always sit at those periods, yet they have a power of appointing sittings after term also, which power is always exercised for the dispatch of arrears of business. And the judges also practically sit nearly all the year round, except in the long vacation, Aug. 10—Oct. 24. Even during that period also, one or more judges attend to perform incidental business; and it is only for some purposes, and for some kinds of business, that the long vacation acts as a suspension of hostilities.—As to the quarter-days usual between landlord and tenant, see LANDLORD AND TENANT.

LAX—LAY.

LAX, a. *lāks* [L. *laxus*, loose, open]: loose; flabby; not firm or rigid; not strict; not rigidly exact; open in the bowels. **LAX'LY**, ad. -*lī*. **LAX'NESS**, n., or **LAXITY**, n. *lāks'ī-tī* [F. *laxité*—from L. *laxitātem*]: looseness; want of exactness. **LAXA'TION**, n. -*ā'shūn*, the act of loosening; state of being loose. **LAX'ATIVE**, a. -*ā-tīv* [F. *laxatif*, laxative—from L. *laxativus*, loosening—*from laxārē*, to render lax]: loosening; mildly purgative: N. an opening or purgative medicine. **LAX'ATIVENESS**, n. -*nēs*, the quality of relaxing. **LAXATOR**, n. *lāks-ā'tēr*, that which relaxes or makes loose, applied to certain muscles.—**SYN.** of 'lax': unrestrained; slack; relaxed; unconfined; vague; licentious; dissolute.

LAY, v. *lā*, pt. of the verb *lie* [pres. *lie*, pt. *lay*, pp. *lain* or *lien*]: often confounded with the verb *lay*: it is improper, for example, to say, 'He *lays* in bed too long'; it should be, 'He *lies* in bed too long': see **LIE** 2.

LAY, v. *lā* [Icel. *leggja*; Ger. *legen*, to lay: Icel. *liggia*, to lie: pres. *lay*, pt. *laid*, pp. *laid*]: to cause to lie down; to put or place; to place in order, as bricks or stone; to spread in order, as, to lay the cloth; to extend, as on the ground; to still; to keep from rising; to impute; to wager; to fix deep; to produce, as eggs; among *seamen*, to take a position; to come or go, as to *lay* forward: N. that which lies or is laid; a stratum; a layer. **LAY'ING**, imp.: **ADJ.** producing eggs, as a hen: N. the first coat of plaster where two coats are to be laid on; the act or period of producing eggs; the eggs laid; mode of propagating trees (see **LAYING**). **LAI**D, pt. and pp. *lād*, did lay. **TO LAY ABOUT**, to strike or throw the arms on all sides. **TO LAY ALONG**, to prostrate. **TO LAY APART**, to put away; to reject. **TO LAY ASIDE**, to put off or away; to discontinue. **TO LAY AT**, to endeavor to strike at. **TO LAY AWAY**, to deposit in store; to lay aside for safe keeping. **TO LAY BARE**, to make bare; to expose completely to view. **TO LAY BEFORE**, to present to view; to show. **TO LAY BY**, to put carefully aside for future use. **TO LAY DAMAGES**, to express the amount in money value. **TO LAY DOWN**, to give as a pledge or satisfaction; to resign; to relinquish; to surrender; to offer or advance. **TO LAY HEADS TOGETHER**, to compare opinions; to deliberate. **TO LAY HOLD OF** or **ON**, to seize; to catch. **TO LAY IN**, to store. **TO LAY ON**, to strike; to apply with force; to add to, as expenses. **TO LAY ONE'S SELF DOWN**, to retire to rest; to commit to repose. **TO LAY ONE'S SELF OUT**, to exert one's self earnestly. **TO LAY OPEN**, to make bare; to uncover. **TO LAY OVER**, to spread over. **TO LAY OUT**, to expend; to dispose the several parts in order, as a garden; to dress in grave-clothes, as a corpse. **TO LAY SIEGE TO**, to surround with troops; to address one's self to a thing pertinaciously. **TO LAY TO**, to charge upon; to impute; to check the motion of a ship, so as to cause her to become stationary, or nearly so. **TO LAY TOGETHER**, to collect; to bring

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into one view. To LAY TO HEART, to allow to affect greatly; to feel deeply. To LAY UP, to store; to put carefully aside for future use; to confine to one's bed or room. To LAY UPON, to wager upon. To LAY WAIT FOR, to lie in ambush for; to be prepared to fall upon and attack suddenly. To LAY WASTE, to destroy; to desolate.—SYN. of 'lay': to set; deposit; establish; prostrate; dispose; arrange; provide; prepare; put on; allay; still; settle; appease; calm; hazard; stake; risk; impose; present; offer; allege; state; produce; bury; inter; add; conjoin; charge; enjoin.

LAY, a. *lā* [Gr. *laikos*, pertaining to the people—from *lāos*, the people: comp. Gael. *luchd*, the people]: not clerical; pertaining to the people as distinguished from the clergy; not belonging to the profession of the speaker. LAY BROTHER, one received into a monastery of monks under certain vows, but not in holy orders: this class was introduced probably in the 11th c.: their vows bind them only to obedience and constancy; they attend on the monks, but are not required to join in all the stated religious services. LAY SISTER, sometimes *sister converse*, one attached to a nunnery as an attendant, but not under the vows of a nun. LAY DAYS, in *maritime law*, number of days granted in the charter-party to the freighter of a vessel for loading or unloading it: see DEMURRAGE. LAY FIGURE, an artist's jointed model figure. LAYMAN, n. *lā'mān*, one not a minister or clergyman. LAITY, n. *lā'i-tī*, the people as distinguished from the clergy: see LAITY above.

LAY, n. *lā* [OF. *lai* or *lais*, a lay: W. *lais*; Icel. *hlíod*, a sound, a note: Gael. *laoidh*; AS. *leod*, a hymn, a poem: Ger. *lied*, a song]: a song; a poem in simple style; a metrical tale.

LAY, n. *lā*: the old spelling of LEA, which see.

LAYAMON, *lā'a-mon*, or LAWEMAN, *law'é-man*: author of the *Brut*, a metrical chronicle of Britain from the arrival of the fabulous Brutus to the death of King Cadwallader, A.D. 689; was, he himself tells us, a priest at Ernely, on the Severn, in Worcestershire, and appears to have lived about the beginning of the 13th c. Nothing more is known concerning him. The *Brut* has no pretensions to originality, being confessedly a compilation from Bede, St. Augustine (of England), St. Albin, and particularly Wace, the Anglo-Norman poet, of whose *Brut d'Angleterre* it is in fact mainly an amplified translation. But Wace's performance is itself only a translation, with additions, from Geoffrey of Monmouth's Latin *Historia Brittonum*; and that again at least declares itself to be in turn a translation from a Welsh or Breton original (see GEOFFREY OF MONMOUTH). Thus L.'s work is only a third reproduction of a Celtic story; but in justice to the author, it must be stated that his version is more poetical and dramatic than those of his predecessors. The great value of the poem, however, is

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linguistic rather than literary. It shows us the Anglo-Saxon changing or changed into Early English, and a study of its peculiarities of grammar and phraseology enables us to trace the process by which the Saxon of Alfred and the Chronicle became transformed into the English of Chaucer and Wicliffe. One curious and important fact is determined by it—viz., that 200 years after the Norman Conquest, the use of words of French origin—so marked a feature of Chaucer's diction—had scarcely begun. In the 32,250 lines which the poem contains, there are not more than 50 such words. The versification is very arbitrary, exhibiting sometimes the alliteration of Anglo-Saxon, and sometimes the rhyme of French poetry. The work was edited (with a literal translation, notes, and grammatical glossary) for the Soc. of Antiquaries of London by Sir Fred. Madden (Lond. 3 vols. 1847).

LAYARD, *lā'érđ*, AUSTEN HENRY: English traveller and diplomatist: b. 1817, Mar. 5, Paris. He was intended for the law, but it was little congenial to his tastes, and he set out on a course of eastern travel, visited several districts of Asiatic Turkey, and became familiar with the manners and dialects of Persia and Arabia. On his first journey along the banks of the Tigris, 1840, he was impressed by the ruins at Nimrud—a village near the junction of the Tigris and the Zab, pointed out by local tradition as the site of the original city of Nineveh—and felt an irresistible desire to examine the remains of the 'birthplace of the wisdom of the west.' In 1842, Botta, French consul at Mosul, conducted some extensive excavations at that place, and L. returning to the region, again directed his attention to Nimrud. It was 1845 before he could obtain the requisite means and facilities for his search, and he then, with the help of some Arabs, began secretly to dig in the mound supposed to contain the ruins. He soon came upon some sculptured remains, and became convinced that he had touched a rich vein of archæological treasure. His excavations were resumed 1846, and his energy and perseverance were rewarded by the discovery of the ground remains of four distinct palatial edifices. The walls had been lined with large slabs of gypsum or alabaster, covered with bas-reliefs and cuneiform inscriptions. Many of these were sent to England by L., together with gigantic-winged human-headed bulls and lions, and eagle-headed idols. They were placed in the British Museum, of which they have since remained one of the chief attractions. L. at first conducted his search at his own expense; he was, 1845, liberally assisted by Lord Stratford de Redcliffe, then British ambassador in Constantinople; and eventually, as the value of these specimens of Assyrian art began to be known, the house of commons voted £3,000, which was applied by the trustees of the British Museum, in continuing the excavations under L.'s superintendence. On his return to England, he

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published a narrative of his explorations, under the title *Ninereh and its Remains*, and another entitled *Monuments of Ninereh*. He was presented with the freedom of the city of London, received the degree D.C.L. from the Univ. of Oxford, and was lord rector of Aberdeen University 1855-6. In 1852 he became M.P. for Aylesbury, and 1860 for Southwark; 1861-66 he was under-sec. of state for foreign affairs 1869 he went as British ambassador to Spain; and 1877 he was sent to Constantinople, first as temporary, then as ordinary ambassador. His markedly Philo-Turkish sympathies during and after the war provoked some criticism in Great Britain. In 1878 the order of the Bath was conferred on him.

LAY'BACH: see LAIBACH.

LAYER, n. *lā'ēr* [Dut. *laag*, a layer: Low Ger. *lage*, a row of things laid in order]: that which is laid; anything carefully laid in due order; a bed; a stratum; a coat, as of paint; a row or course, as of bricks; a shoot or twig of a plant for propagating. LAY'ERING, n. the propagation of plants by layers.

LAYETTE, n. *lā-ēt'* [F. *layette*, a box, then the linen in the box]: all the articles necessary for a new-born infant; baby-linen.

LAY'ING, or LAY'ERING: mode of propagating trees, shrubs, and perennial herbaceous plants, frequently employed by gardeners and nurserymen. It consists in bending and fastening a branch, so that a portion of it is imbedded in earth, there to throw out roots, the extremity being made to grow erect in order to form a new plant. The separation from the parent plant is not effected till the layer is sufficiently provided with roots. Any injury which prevents the free return of the sap greatly promotes the formation of roots, and a notch is therefore usually made in one side of the branch, at the place where the formation of roots is desired; it is also often a little split up from the notch; and sometimes a ring of bark is cut off, or a wire is twisted round it. The time which must elapse before the layer should be separated from the parent plant is very various; a few months being sufficient for some, and two years requisite for others. Many plants which can be propagated by cuttings are more easily and successfully propagated by layers.

LAYMAN, n. *lā'măn* [*lay* and *man*: see LAY 2]: one not a clergyman; one not a professional man, as to a medical man, all men outside his profession are laymen.

LAYNEZ (or LAINEZ), *lī-nēth'*, DIEGO: 1512-1565, Jan. 19; b. Almazan, Castile: general of the Jesuits. He was educated in the universities of Alcalá and Paris; was ordained priest in Venice 1537; became teacher of scholastic theology in Sapienza College, Rome, 1538; and was afterward assigned to special mission work in upper Italy. In 1542 a Jesuit college was founded in Padua through his efforts; 1546 he was one of the pope's theo-

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logians at the Council of Trent; 1548 was engaged in founding schools and hospitals in Sicily and the college at Palermo; 1550 accompanied the Spanish expedition to Tunis; and 1551 became provincial of the Jesuits in upper Italy, opened the debates on the reassembling of the Council of Trent, and was ordered by Ignatius Loyola (q.v.) to compile a complete summary of dogmatic theology as atonement for an act of insubordination. On the death of Loyola he governed the order of the Soc. of Jesus till 1558, when he was chosen general. He attended the conference of Poissy by order of the pope 1561, took a leading part in the Council of Trent 1562, and to the end of his life was zealous in teaching, promoting Jesuit missionary work, and establishing educational and charitable institutions.

LAYSTALL, n. *lā'stawl* [Gael. *lios-stail*, a place in the garden for the refuse—from *lios*, a garden; *stail*, to throw]: in *OE.*, a place for the refuse of a garden or farm for use as manure; a dung-heap; also spelled LAYSTOWE.

LAZAR, n. *lā-zâr* [from *Lazarus* in the parable: F. *lazare*]: one affected with a filthy and dangerous disease. LAZAR-HOUSE, a hospital for those affected with pestilential diseases. LAZARETTO, n. *lăz'ă-rĕt'tô* [It.]: a lazarethouse. LAZZARONI, n. plu. *lăz'ă-rō'nĭ* or *lăt'sér-ō'nĕ* [It.]: name formerly given to the poor of Naples who had no regular occupation, and who lived in the streets, occasionally obtaining employment as messengers, porters, boatmen vitinerant venders of food, etc. They were an important element in all the revolutions and movements in Naples for a long period, and in recent times allied themselves to the cause of despotism. They were wont annually to elect a chief (*Capo Lazzaro*), who was formally recognized by the Neapolitan govt., and who exercised extraordinary power over them. Of late, they have lost many of their peculiarities, have come more within the pale of civilization, and, in fact, are no longer recognized as a separate class, though the name is still given to the boatmen and fishermen of the city, who are really the most industrious and best-principled of the Neapolitan populace.

LAZARISTS, or LAZARITES, or LAZARIANS: congregation of mission priests of the Rom. Cath. Church, for labor in rural districts and among the poor and in foreign lands; organized by Vincent de Paul, France 1624; confirmed as an independent order by Urban VIII., 1632. They were named from the priory of St. Lazare in Paris, whose use was granted them. Before the death of their superior, St. Vincent, they had visited and labored through France, and in Poland, Italy, Corsica, Scotland, Ireland, Barbary, and Madagascar. They were suppressed in the French Revolution, restored by Napoleon 1804, abolished by him 1809, restored by Louis XVIII. 1816. In 1862, the L. reported 68 houses in Europe, establishments in several countries of Asia and

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Africa, and 17 houses in America: their total number (1874) was estimated 3,000. Their dress is that of the secular clergy.

LAZARUS, *lăz'a-rūs*, EMMA: 1849, July 22—1887, Nov. 19; b. New York: author. She was a highly gifted and devout Jewess; began composing verses when a mere child; published her first collection of poems 1866; a second, *Admetus, and other Poems*, 1871; a prose romance, *Alide, An Episode of Goethe's Life*, 1874; translations, *Poems and Ballads of Heine*, 1881; and her most noted work, *Songs of a Semite*, 1882. She also was author of a tragedy, *Lo Spagnoletto* (1876), and a number of prose sketches and poems in the *Century* magazine. She sang for her race and her song was always sweet and pure.

LAZULI, n. *lăz'ū-lī* [Pers. *lazur*; Sp. *azur*, azure, sky-blue: Sp. *azul*, blue]: a mineral of a fine azure-blue color, consisting of silicate of alumina, soda, and lime; also called LAPIS-LAZULI, *lăp'is*, or ULTRAMARINE [L. *lapis*, a stone]. LAZULITE, n. *lăz'ū-līt* [*lazuli*, and Gr. *lithos*, a stone]: called sometimes AZURITE, a mineral long confounded with Lapis Lazuli (q.v.), but though somewhat similar in its light-blue color, very different in composition; consisting chiefly of phosphoric acid and alumina, with magnesia and protoxide of iron. It occurs imbedded in quartz, or in fissures in clay-slate, in North Carolina, Brazil, Styria, etc.

LAZY, a. *lă'zī* [OF. *lasche*; F. *lâche*, slack, loose, cowardly—from mid. L. *lascus* for L. *laxus*, loose, broad: Dut. *losig*, loose in texture: Ger. *lass*, slack, dull]: disinclined to exertion; indolent; unwilling to work. LAZILY, ad. *lă'zī-lī*. LA'ZINESS, n. *-nēs*, indisposition to exertion or labor; habitual sloth. LAZE, v. *lăz*, in OE., to live idly; to be idle; to waste in laziness. LAZ'ING, imp. LAZED, pp. *lăzd*.—SYN. of 'lazy': idle; slothful; sluggish; slow.

LAZ'ZARI, DONA'TO: see BRAMANTE.

LE, or LEH, *lā*: capital of Ladakh (q.v.) or Middle Tibet, 2 m. n. of the Upper Indus, lat. 34° 10' n., and long. 77° 40' e., more than 11,500 ft. above sea-level. L. is a main *entrepôt* between Tartary and the Punjab, and for the shawl-wool of Tibet. Pop. variously estimated 4,000 to 10,000.

LEA, n. *lē* [Dut. *ledig*, empty, fallow: AS. *leag*, the untilled field: Low Ger. *loge*, in *place-names*, a low-lying tract, a grassy plain: comp. Gael. *lis* or *lios*, a garden or field]: land under grass or pasturage for a certain period; grass or meadow-land; spelled also LEY and LAY.

LEA, *lē*, HENRY CHARLES: author and publisher: b. Philadelphia, 1825, Sep. 19; of Quaker descent, son of Isaac L., LL.D. (b. 1792). He early became interested in the scientific researches of his father and his uncle, Thomas

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Gibson L.; wrote a paper for *Silliman's Journal*, when 14 years old; and soon afterward entered the publishing house established by his father and Matthew Corey (father of L.'s mother), which subsequently became Lea & Blanchard, and is now Lea Brothers & Co. During the civil war he formulated the plan of encouraging volunteering by means of municipal bounties. Beside attending to his publishing business, L. has written and published a number of papers on chemistry and conchology: *Description of New Species of Shells*; *Superstition and Force: Essays on the Wager of Battle, the Wager of Law, the Ordeal and Torture* (Philadelphia 1866); *Studies in Church History: the Rise of the Temporal Power, Benefit of Clergy, Excommunication, the Early Church and Slavery* (1869); *An Historical Sketch of Sacerdotal Celibacy* (1867, 83); and *A History of the Inquisition of the Middle Ages*, 3 vols. (New York 1888).

LEACH: see LETCH.

LEAD, v. *léd* [Icel, *leida*, to lead; *leid*, a track, a way; Sw. *leda*; Dan. *lede*, to lead—from *led*, a gate]: to guide; to conduct; to go before to show the way; to have a tendency to; to spend or use, as to lead a pleasant life; to draw; to entice; to induce: N. guidance; first place. LEAD'ING, imp. guiding; conducting; passing: ADJ. chief; principal: N. guidance. LED, pt. and pp. *léd*, did lead. LEADER, n. *léd'ér*, a conductor; a chief; the head of a party or faction; performer in an orchestra, who plays the principal first violin; one of the front horses when four are driven; that which leads or conducts; pipe conveying water away from a roof; the principal article in a newspaper; in *bot.*, the primary or terminal shoot of a tree. LEAD'ERSHIP, n. state or condition of a leader. LEAD'INGLY, ad. *-lī*. LEADING-STRINGS, strings by which children are supported when beginning to walk. TO BE IN LEADING-STRINGS, to be in a state of dependence on others, and under their control. TO LEAD ASTRAY, to guide in a wrong way; to seduce from good conduct. TO LEAD OFF, to begin. LEADING ARTICLE, the principal article of a newspaper. LEADING NOTE [Fr. *note sensible*]: in *music*, usually understood to mean the sharp seventh of the diatonic scale, or the semi-tone below the octave, to which it leads. The most of the German theorists have now relinquished the term leading note, as every note, when it is felt that another immediately above or below it should follow, may be said to be a leading note. LEADING QUESTION, a question naturally conducting or leading to others, or which suggests to the person questioned the answer he is wished to make (see LEADING QUESTION, in LAW): in *politics*, a matter or subject which engrosses much of public attention. — SYN. of 'lead, v.': to introduce; allure; pass;—of 'leader': chieftain; commander; captain; head; principal.

LEAD.

LEAD, *n.* *lěd* [AS. *lead*; Dut. *lood*; Dan. *lod*, the metal lead—hence Sw., Dan. *lod*, a weight, a plummet]: a soft metal of a bluish-gray color (see below): the plummet or piece of lead attached to a long string or cord, used in sounding at sea (see LEAD, THE); a slip of type-metal: *V.* to cover with lead; in *printing*, to widen the spaces between the lines by inserting *leads*, or slips of type-metal. LEAD'ING, *imp.* LEAD'ED, *pp.* LEADS, *n.* *plu. lědz*, a roof covered with sheets of lead; the slips of metal employed by compositors for inserting between the lines of type. LEADEN, *a.* *lěd'n*, made of lead; heavy. BLACK-LEAD, a form of carbon, known also as *plumbago*, much used in the manufacture of pencils; a preparation for blacking and cleaning grates, etc. HAND-LEAD, the sounding-lead for shallow water—so called from its being thrown by the hand. LEAD-ARMING, a lump of tallow, pressed into the lower end of the sounding-lead, for the purpose of ascertaining the quality of the bottom. LEAD-GLANCE, an early and familiar name for the sulphide of lead or *galena*. LEAD-OCBRE, a massive sulphur-yellow oxide of lead, occurring among volcanic products. LEAD-PENCIL, a pencil containing a strip of black-lead or *plumbago*, used for writing with. LEAD PLASTER (see DIACHYLON). LEAD-SPAR, the carbonate of lead, or *cerussite*. RED-LEAD SPAR, the chromate of lead, or *crocoisite*. WHITE-LEAD, oxide of lead of a white color, used as the basis of white paint (see below). SUGAR OF LEAD, see SUGAR.—*SYN.* of 'leaden': dull; stupid, unwilling; motionless; absurd.

LEAD (*symb.* *Pb.*, *equiv.* 103·7—new system, 207—*spec. grav.* 11·4): bluish-white metal; of considerable brilliancy which soon disappears on exposure to the air owing to the formation of a thin film of oxide. *L.* is so soft that it may be readily cut with a knife, or may be made to take impressions, and it leaves a streak upon paper. It may be cut or beaten into thin sheets, but in ductility and tenacity it is low in the scale of metals. It is readily fusible at a temperature of about 625°, softening at 617°, and becoming completely liquid at 635° F., authorities differing as to its exact fusing point, none placing it as low as 600° F., and at a higher temperature it absorbs oxygen rapidly from the air, and the oxide thus formed volatilizes at higher temperatures in the form of white fumes.

The combined action of air and water on *L.* is a subject of great practical importance, as the metal is frequently used in the construction of cisterns and water-pipes. The *L.* becomes oxidized at the surface, and the water dissolves the oxide; this solution absorbs the carbonic acid of the atmosphere, a film of hydrated oxycarbonate of lead ($\text{PbH}_2\text{O}_2 + \text{PbCO}_3$) is deposited in silky scales, and a fresh portion of oxide of *L.* is formed and dissolved, and in this way a rapid corrosion of the metal ensues. This action is materially increased by the presence of

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some salts in the water, and diminished by the presence of other salts. It is much increased by the occurrence of chlorides (which, as chloride of sodium, are often present in spring water), and of nitrates and nitrites (often present in spring and river waters, from the decomposition of organic matter); while it is diminished by the sulphates, phosphates, and carbonates, especially by carbonate of lime, which is an extremely common impurity in spring water. In the latter case, a film of insoluble carbonate of L. is rapidly formed on the surface, and the metal beneath is thus protected from the action of the water. If, however, the water contains much carbonic acid, the carbonate of L. may be dissolved, and considering the dangers that arise from the use of water impregnated with L., cisterns constructed of slate are far preferable to leaden ones.

Native L. is of very rare occurrence. Almost all the L. of commerce is obtained from galena or galenite, the native sulphide of L., by a process explained below. The L. thus obtained is often *nearly* pure, and to obtain it *perfectly* pure, it should be reduced with black flux from the oxide left by igniting the pure nitrate or carbonate.

The compounds of L. with oxygen are four in number—viz., a sub-oxide, Pb_2O , a blackish powder rapidly absorbing oxygen when moistened; a protoxide, PbO , the base of the ordinary salts of the metal; a binoxide, PbO_2 ; and red lead, which is a compound of the two last-named oxides, and is usually represented by the formula $2PbO, PbO_2$. The protoxide is commonly known as *Litharge*. It is obtained on a large scale by the oxidation of L. in a current of air, when it forms a scaly mass of a yellow or reddish tint. If the oxidation be effected at a temperature below that required for the fusion of the oxide, a yellow powder, also the protoxide termed *Massicot*, is obtained. Litharge is much used by the assayer (see *ASSAY*) as a flux; it enters largely into the composition of the glaze of common earthenware, and it is employed in pharmacy in the preparation of plasters. A mixture of 1 part of massicot with 10 of brickdust, made into a paste with linseed-oil, forms the compound known as *Dhil mastic*, which, from the hardness with which it sets, is frequently used to repair defects in stone-facings.

The most important of the salts of the protoxide of L. are—1. The *carbonate* ($PbCO_3$), which occurs native as a beautiful mineral termed cerussite in transparent needles or fibrous masses, and an approach to which is prepared under the name of *white lead* on a large scale as a pigment by a process described below. The carbonate is insoluble in water, unless it is largely charged with carbonic acid. It is quickly blackened by exposure to hydrosulphuric acid (sulphuretted hydrogen), either in the form of gas or in solution, and this is a serious drawback to the use of white L. as a pigment. 2. The *sulphate* ($PbSO_4$), which occurs native as anglesite in white

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prismatic crystals, and is formed as a heavy white precipitate on adding sulphuric acid or a soluble sulphate to a soluble L. salt. 3. The *nitrate* ($\text{Pb}(\text{NO}_3)_2$), which is formed by dissolving L. or its protoxide in dilute nitric acid. 4. The *chromates*, of which the principal are the neutral chromate or *chrome yellow* (PbCrO_4) and the diplumbic or basic chromate or *chrome orange* (Pb_2CrO_5). These are much used as pigments, and in calico dyeing. 5. The *acetates*. The ordinary or neutral acetate ($\text{Pb}(\text{C}_2\text{H}_3\text{O}_2)_2 + 3\text{aq.}$) is prepared on a large scale by the solution of litharge in distilled vinegar, and evaporation, when the salt is obtained in four-sided prisms, or more commonly in a mass of confused minute white crystals, which at 212° lose their water of crystallization. From its appearance, and from its sweetish taste, it derives its common name of *sugar of lead*. It is much used in medicine and in the arts. Basic acetate of L., regarded by some chemists as a diacetate, and by others as a triacetate, and commonly known as *Goulard's Extract*, is prepared by boiling a solution of sugar of L. with litharge, and adding alcohol, when the salt separates in minute transparent needles. It is the active ingredient of *Goulard Water*, which is imitated by the *Liquor Plumbi Diacetatis Dilutus*, and of *Goulard's Cerate*, which is imitated by the *Ceratum Plumbi Composition* of the London Pharmacopœia.

The best tests for solutions of the salts of L. are the formation of a black sulphide with hydrosulphuric acid or ammonium sulphide, insoluble in an excess of the reagent; of a white insoluble sulphate with sulphuric acid, or a soluble sulphate; of a yellow chromate with chromate or bichromate of potassium; and a yellow iodide with iodide of potassium. Before the blow-pipe on charcoal, the salts of L. yield a soft bead of the metal, surrounded by a yellow ring of oxide.

Use in Medicine.—The most important compound of L. in the materia medica is the *acetate of lead*, administered internally as an astringent and as a sedative. It is of service as an astringent, especially in combination with opium, in mild English cholera, and even Asiatic cholera, and in various forms of diarrhea. It will frequently check the purulent expectoration in phthisis, and the profuse secretion in bronchitis. In the various forms of hemorrhage—as from the lungs, stomach, bowels, or womb—it is employed partly with the view of diminishing the diameter of the bleeding vessels, and partly with the object of lowering the heart's action, and by these means to stop the bleeding. The ordinary dose is two or three grains, and half a grain of opium, in the form of a pill, repeated twice or thrice daily. If given for too long a time, symptoms of Lead-poisoning (q.v) will arise.

Mining, Smelting, etc.—L. was largely worked by the Romans in Great Britain, and pigs of it with Latin inscriptions have been frequently found near old smelting-

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works. The mining of L. in England was formerly regulated by curious laws; some places, such as the King's Field, in Derbyshire, having special privileges. It was the custom in this district not to allow the ore to leave the mine till it was measured in the presence of an official called a *bar-master*, who set aside a 25th part as the king's cope or lot. Till a comparatively recent period, persons were allowed to search for veins of the ore without being liable for any damage done to the soil or crops.

L. ore is generally distributed over the earth, the largest supply being from the United States, Britain and Spain. Britain produces about 40,000 tons, and imports ores yielding about 140,000 tons per annum. A large proportion of the total British product is procured from the Northumberland and Durham districts, where there exists, at Allenheads, one of the largest mining establishments in the world. Scotland and Ireland furnish a very small quantity. Immense deposits of galena are in Nevada, near the city of Eureka (mostly in limestone pockets): this ore contains about 30 per cent of L. and 0·2 to 0·3 per cent of silver. Immense deposits were discovered 1877 in Colorado, in the Rocky Mountains near the source of the Arkansas river: this ore contains 24 to 42 per cent. of L. and 0·1 to 2 per cent. of silver. The city of Leadville was the result of this discovery, having within its first year 10,000 inhabitants. Other principal L. districts in the United States are those of the Upper Mississippi, Missouri, and Utah.

With the exception of a little from the carbonate of L., all the supplies of this metal are obtained from the sulphide of L. or Galena (q.v.). The L. ore, when taken from the mine, is broken up into small pieces, 'hotched,' and washed, to separate impurities, by apparatus described under METALLURGY. Sulphide of lead, when approximately pure, is smelted with comparative ease. It is first roasted in a reveberatory furnace. From 20 to

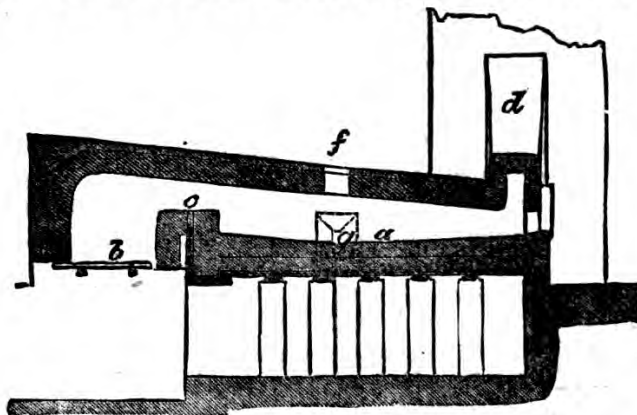


Fig. 1.—Section of a Reverberatory Lead Furnace.

40 cwts. of galena are put into the furnace at a time, either with or without lime. In about two hours, the

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charge becomes sufficiently roasted. During the process, the larger portion of the ore (PbS) takes up four equivalents of oxygen, and becomes sulphate of lead (PbSO_4), a little oxide of lead (PbO) is also formed, while another portion remains unaltered as sulphide of lead. After it is roasted, the charge is thoroughly mixed together, and the heat of the furnace suddenly raised. This causes a reaction between the unchanged and the oxidized portion of the ore, and reduces much of the L., sulphureous acid being at the same time evolved. In the third stage, lime is thrown in and mixed with slag and unreduced ore. When this becomes acted on, the whole of the L. is practically separated from the ore, and is then run off at the tap-hole *g*.

In some districts, the roasted ore is smelted on a separate ore-hearth called the Scotch furnace, where the heat is urged by bellows. Peat and coal ore are used as fuel. This is a slower mode of smelting than the last, but yields a purer lead.

During the operation of smelting, a considerable quantity of L. is volatilized, and carried off as *fume* or *smoke*,

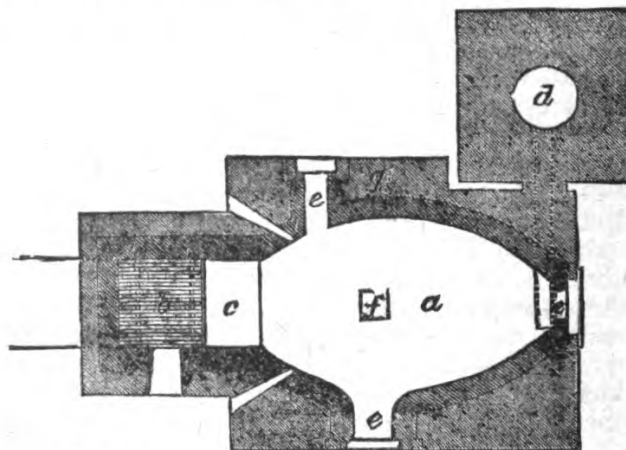


Fig. 2.—Plan of a Reverberatory Lead Furnace:

a, hearth on which the ore is spread; *b*, fireplace or grate; *c*, the fire bridge; *d*, chimney; *e*, working doors; *f*, opening for supplying ore; *g*, tap-hole.

which, when allowed to escape into the atmosphere, not only involves a loss of lead, but destroys all vegetation for some distance around the works, and poisons cattle and other animals feeding near them. Much attention has of late been given to the obviating of these evils, and several plans are in use. Where it can be done, no method is more effective than simply conducting the smoke from the furnaces through a long horizontal flue—say a mile in length—to a vertical stack. The fume condenses on the sides, certain openings being left for the purpose of collecting it. About 33 per cent. of the fume thus recovered consists of metallic lead.

When L. contains antimony and tin as impurities, they are separated by fusing the metal in shallow pans, and

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allowing it to oxidize at the surface. In this way, the antimony and tin form oxides, and as such are skimmed off. L. reduced from galena always contains a little silver, of which 8 or 10 ounces to the ton is a very

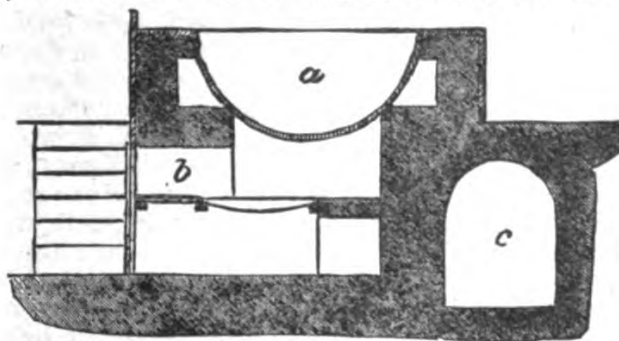


Fig. 3—Desilverizing Pot:
a, pot; b, fireplace; c, main flue.

common proportion, though it often exists in much larger quantity. The separation of this silver is now greatly facilitated by means of a desilverizing process patented by H. Pattinson, of Newcastle-on-Tyne, England. It consists in melting the L., and allowing it to cool slowly, at the same time briskly stirring the melted mass. A portion of the L. is thus made to crystallize in small grains, which, as pure L. solidifies at a lower temperature than when alloyed with silver, leaves the uncrystallized portion richer in silver. In this operation, a row of, say, nine cast-iron pots are used similar to the one shown in fig. 3. They are usually about 6 ft. in diameter, each heated with a fire below. The L. from the smelting furnace is treated as above in the middle pot, from which the poorer crystallized portion is ladled with a strainer into the first pot on the right, and the richer portion, which remains liquid, is removed to the first pot on the left. With both kinds, the process is several times repeated—the one becoming poorer, and the other richer in silver every time, till the L. in the pot on the extreme right has had its silver almost entirely removed, and that in the pot on the extreme left contains about 300 ounces of silver to the ton. The silver is then obtained from this rich L. by melting it on a flat bone ash cupel, placed in a reverberatory furnace, and exposing it to a current of air which reduces the L. to the oxide or *litharge* of commerce, leaving the silver on the cupel. This separation of the silver improves the quality of the lead.

L. is important in the arts. * Rolled into sheets, it is largely used for roofing houses, for water-cisterns, and for water-pipes. It is of great service also in the construction of large chambers for manufacture of sulphuric acid. Its value for the manufacture of shot is well known. Alloyed with antimony, etc., it is largely consumed for type-metal, and with tin for solder. Much L. is required also for the manufacture of pewter, Britannia metal, etc. See ALLOY.

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Of the compounds of L. other than alloys which occur largely in commerce, the following are the principal:

White Lead or Carbonate of Lead, very extensively used as white paint, also to form a body for other colors in painting. White L. is still made largely by the old Dutch process, which consists in treating metallic L., cast in the form of stars or gratings, in such a way as to facilitate the absorption of carbonic acid. These stars of L. placed in earthenware vessels, like flower-pots, containing a little weak acetic acid, are built up in tiers in the form of a stack, and surrounded with spent tan or horse-dung. The heat given out from the dung volatilizes the acid, which, with the air, oxidizes the lead. The acetic acid changes the oxide into the acetate of L., and this is, in turn, converted into the carbonate by the carbonic acid given off from the hotbed. By this process, metallic L. requires from six to eight weeks for its conversion into white lead. Several less tedious processes for the manufacture of a white paint from L. have been tried at various times, but the only one now practiced is that for the production of an oxychloride of L. by acting on raw galena with hydrochloric acid.

Minium, Red Lead, or Red Oxide of Lead, is much consumed in the manufacture of flint-glass and porcelain, and to some extent as a pigment. It requires to be made of very pure L., as a slight trace of copper would impart a color to glass. Minium is prepared by heating *massicot* or protoxide of L. to a temperature of 600° F. in iron trays, in a reverberatory furnace, carefully avoiding fusion. More oxygen is thus gradually absorbed; and a compound of the protoxide and the peroxide of L. is formed, having a bright red color, which is the red L. of commerce.—*Litharge* has been noticed above.

In 1872 the United States produced 20,000 tons of L.; (1880) 53,140 tons valued at \$2,102,948, of which Mo. yielded 28,315, Va. 11,200, Kan. 10,681, Wis. 1,728, Ill. 772, Ho. 384, Tenn. 60; (1882) 132,890 tons, of which Colo. yielded 58,642, Utah 30,000, Nev. 8,590, Miss. L. region 29,015; (1886) 135,629 tons, valued at \$12,667,749; (1887) 160,700 tons, valued at \$14,463,000. During the year ending 1887, June 30, the importations were in value \$323,256, and the exportations \$141,154; and in the year ending 1888, June 30, the exportations fell to \$129,558. The chief L.-producing regions 1890 were those of the Upper Mississippi valley, including the states of Wis., Io., and Ill., with Wis. ranking first in richness, and the state of Mo. Several of the Mo. mines are quite noted, as 'La Motte,' which is known to have been worked 150 years ago, and to have yielded as much as 1,000,000 lbs. per annum, and the Vallé and Perry mines, which have been nearly as productive.

LEAD, THE: plummet on shipboard, for ascertaining the depth of water, consisting of a piece of lead shaped like an elongated clock-weight, attached to a line of about 20 fathoms. The lower part of the lead is scooped

LEADHILLITE—LEAD-POISONING.

out, and filled with tallow, that portions of the bottom may adhere to show what is its nature. The *deep-sea lead* weighs 25 to 30 lbs., and is attached to a line of far greater length.

LEADHILLITE, n. *lěd'hīl-īt*: a mineral of a yellowish or greenish-white color, occurring in tabular crystals or in foliated aggregates, consisting of sulphate and carbonate of lead—so called from being first found in the *Leadhills*, Scotland.

LEADING QUESTION, in Law: question so put to a witness as to suggest the answer that is desired or expected. Thus, if a witness is asked: 'Was he dressed in a black coat?' it is supposed the witness will answer, yes; whereas the proper way of putting the question is: 'How was he dressed?' or, 'What kind of a coat?' etc. The rule established in courts of justice as to the correct practice in such matters, is, that when a witness is examined in chief, i.e., by the party who adduces such witness, leading questions are not allowed, except in one or two rare cases; whereas, when the witness is cross-examined, i.e., by the opposing party, leading questions may be put; for the object is to make the witness contradict and stultify himself, so that the jury will disbelieve him. The above rule, however, applies only to material questions, for in immaterial questions leading questions may be put, to save time.

LEAD-POISONING: impregnation of the system with lead, causing diseases affecting painters, who are constantly handling white lead, or persons who for a length of time have been using water charged with a lead-salt.

The early phenomena of L.-P. or saturnine poisoning, which constitute what Tanquerel des Planches, highest authority on this subject, terms *primitive saturnine intoxication*, are, (1), a narrow blue line, due to the presence of sulphide of lead, on the margins of the gums next the teeth; (2), a peculiar taste in the mouth, and a peculiar odor of the breath; (3), a jaundiced skin, with more or less emaciation; (4), a depressed circulation.

These premonitory phenomena are followed, unless remedial means are adopted, by the four following forms of disease, each of which may exist alone, or may be complicated with one or more of the others, or may follow the others, without any definite order of succession.

1. **LEAD COLIC**; far the most frequent of the diseases.
2. **LEAD RHEUMATISM**, or **ARTHRALGIA**; in frequency is next to colic.
3. **LEAD PALSY** or **PARALYSIS**; affecting either motion or sensation; next in frequency.
4. **DISEASE OF THE BRAIN**; least common of all the forms of L.-P., and manifested by delirium, by coma, or by convulsions.

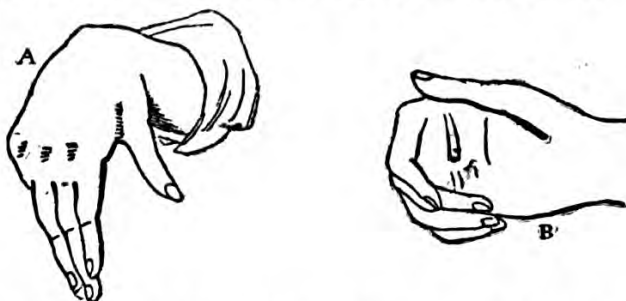
Lead Colic is characterized by sharp continuous abdominal pains, usually diminished on pressure; by hardness and depression of the abdominal walls; by obstinate constipation, slowness and hardness of the pulse,

LEADVILLE.

and general disturbance of the system. The blue line on the gums serves at once to distinguish it from other varieties of colic.

Lead Rheumatism is characterized by sharp pains in the limbs, unaccompanied by redness or swelling, diminished by pressure, increased by motion, and accompanied by cramps, with hardness and tension of the affected parts. It is distinguished from similar affections by the blue line on the gums.

Lead Palsy is characterized by a loss of voluntary power over certain muscles. It more commonly affects the upper than the lower extremity, and the muscles most frequently affected are those of the ball of the thumb, and the extensors of the wrist, giving rise to the condition represented in the figure as *wrist-drop*.



A shows the dropping of the hand in consequence of the palsy of the extensor muscles, while B shows the wasted condition of the muscles which form the ball of the thumb.

Treatment.—The patient should be placed in a sulphur-etched bath, which converts all the lead-salts on the skin into the inert black sulphide of lead. These baths should be repeated till they cease to cause any coloration of the skin. At the same time, he should drink water acidulated with sulphuric acid, or a solution of sulphate of magnesia, with a slight excess of sulphuric acid, by which means an insoluble sulphate of lead is formed, which is eliminated by the purgative action of the excess of sulphate of magnesia. Iodide of potassium is then administered, which acts by dissolving the lead out of the tissues, and allowing it to be removed by the urine. The palsy may be specially treated, after the elimination of the lead, by electricity, and by strychnine in minute doses.

Persons exposed from their occupation to the risk of L.-P. should be especially attentive to cleanliness; and if they combine the frequent application of the warm bath with the use of sulphuric lemonade or treacle beer acidulated with sulphuric acid, as a drink, they may escape the effects of the metallic poison.

LEADVILLE, *léd'vil*: city, cap. of Lake co., Colo.; on branches of the Denver and Rio Grande and the Union Pacific railroads; 114 m. s.w. of Denver; on the Mosquito range of the Elk Mountains; 10,200 ft. above the sea. In 1877 its site had about 25 inhabitants. It owes its celeb-

LEAF.

rity to the accidental discovery in the latter part of 1877 of chloride of silver in a quantity of stones which with earth was being washed for gold in California gulch 4 m. distant. A rich quality of lead also was found, but owing to inadequate means of transportation the miners gave it no attention. Search, however, was made for the outcrop of the silver-bearing stones, and when it had been located on Iron Hill the discoverers began mining there. News of the 'find' spread rapidly, and during the winter 1877-8 several thousand miners came to L., examined its numerous hills, made further discoveries, and began mining on Carbonate, Fryer, Evans, Long, and Derry Hills. By 1879, Mar. 1, carbonates of silver and lead had been taken from the various mines to the value of \$5,000,000, the fame of Fryer Hill particularly had spread through the country, and miners, adventurers, and gamblers were flocking to L. at the rate of 2,000-3,000 per month. During 1880 there was much exploration and development. In 8 of the Fryer Hill mines alone more than 75,000 linear ft. of drifts, levels, winzes, and raises were made, representing about 2,000,000 cubic ft.; and in many places on Iron Hill the ore body was found to range 15-35 ft. in thickness, all of good grade. Numerous additional discoveries of chloride bodies and a score or more of rich strikes of free milling silver and gold-bearing ores and quartz were made. The product of all the mines during the year was 67,721,856 lbs. of bullion, 8,979,399 oz. of silver, 1,688 oz. of gold; tons of ore shipped 12,410; value of silver \$10,195,169, gold \$34,014, lead \$3,335,507, ore shipped \$1,460,363; total \$15,025,153. The product of the L. mining district from the beginning of placer mining to 1881 was: 1860-73, gold from placers \$6,400,000; 1874, gold and silver \$145,000; 1875, gold and silver \$113,000; 1876, gold, silver, and lead \$85,200; 1877, \$555,330; 1878, \$3,152,925; 1879, \$10,189,521; 1880, \$15,025,153; total \$35,666,129. In 1880 the mines were being worked by 12 companies capitalized at \$72,000,000, and 10,000-15,000 men. More than \$4,000,000 were paid in dividends and nearly \$2,000,000 for transportation of machinery and other mining necessities, food, lumber, cooking utensils, etc. for the miners, and ores and bullion. Since then wild speculation and the excitement that follows the opening of a new mining region have subsided; better influences prevail; and under them L. has become a city of order, thrift, and stability. The output (1884) was \$13,000,000. It had (1885) about 60 producing mines, 5 smelting furnaces, sampling, refining, and reduction works, churches, graded public schools, 2 national banks (cap. \$300,000), substantial business and dwelling-houses, and daily and weekly newspapers. There are water-works, gas-works, and electric lights. Pop. (1880) 14,820; (1885) 10,925.

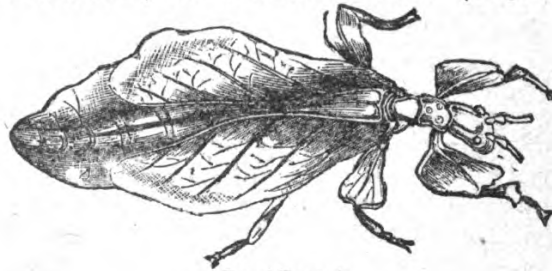
LEAF, n. *lēf*, LEAVES, n. plu. *lērz* [Icel. *lauf*; Sw. *löv*; Dan. *löv*, foliage: Ger. *laub*; Dut. *loof*, the leaves of

LEAF-CUTTER BEE—LEAF-ROLLERS.

trees]: thin, broad, and somewhat oval part of a plant growing from the stems and branches (see LEAVES); anything resembling a leaf in thinness; one of the many thin sheets of a book; the broad movable part of a thing, as of a table or door: V. to unfold or produce leaves. LEAF'ING, imp.: N. the process of unfolding leaves. LEAFED, pp. *lēft*. LEAVED, a. *lēvd*, having leaves. LEAFLESS, a. *lēf'lēs*, without leaves. LEAF'LESSNESS, n. *-nēs*, the state of being destitute of leaves. LEAFAGE, n. *lēf'āj*, abundance of leaves; season of leaves. LEAFLET, n. *lēf'lēt*, a little leaf. LEAFY, a. *lēf'ī*, full of leaves. LEAFINESS, n. *-nēs*, state of being full of leaves. LEAF-BUD, a bud producing leaves. LEAF-STALK, the stalk or small branch which supports a leaf. LEAF-TRACE, the scar left by the falling of a leaf. TO TAKE A LEAF OUT OF ONE'S BOOK, to imitate the manner of life and doings of another. TO TURN OVER A NEW LEAF, to begin a fresh and reformed life.

LEAF-CUTTER BEE: name given to certain species of *solitary bees* (see BEE) of genera *Megachile* and *Osmia*, in consequence of their habit of lining their nests with portions of leaves, or of the petals of flowers, which they cut out for this purpose with the mandibles. *Megachile centuncularis* uses the leaves—not the petals—of roses, fitting the pieces together to form one thimble-shaped cell within another, in a long cylindrical burrow, the bottom of each cell containing an egg and a little pollen paste. The structure of these nests is very nice and curious.

LEAF-INSECT, or WALKING-LEAF (*Phyllium*): re-



Leaf-Insect.

markable genus of orthopterous insects, of family *Phasmidæ* (q.v.), natives of tropical countries, having wings extremely like leaves, not only in color, but in the way in which they are ribbed and veined. The joints of the legs also are expanded in a leaf-like manner. These insects spend their lives among leaves, move slowly, and would be much exposed to every enemy, did not their leaf-like appearance preserve them from observation.

LEAF-ROLLERS (*Tortricidæ*): family of moths—small nocturnal lepidopterous insects, of numerous genera and species; destructive to vegetation. The larvæ roll themselves within the leaves of plants. The insect seldom measures more than an inch across the expanded wings: the fore-wings have spots or bands; the hind wings are plain.

LEAGUE—LEAK.

LEAGUE, n. *lēg* [F. *ligue*; It. *lega* or *legua*, an alliance—from L. *ligārē*, to bind]: a union or combination for interest, friendship, or party purposes; an alliance, as between states: V. to unite or combine for mutual aid or defense, etc. **LEAG'UING**, imp. **LEAGUED**, pp. *lēgd*. **LEAG'UER**, n. *-ēr*, one who enters into a league; a confederate.—**SYN.** of 'league, n.': confederacy; combination; compact; coalition; contract.

LEAGUE, n. *lēg* [OF. *legue* and *luie*; F. *lieue*, a league—from mid. L. *leuca*, a measure of distance: Gael. *leug* or *leag*; W. *llech*, a stone]: measure of length, of great antiquity; used by the Romans, who derived it from the Gauls, and estimated it as equivalent to 1500 Roman paces, or 1·376 modern English miles. The L. was introduced into England by the Normans, probably before the battle of Hastings (1066), and had been by this time lengthened to 2 English m. of that time, or $2\frac{9}{10}$ modern English m. At the present day, the L. is a nautical measure, and signifies the 20th part of a degree—i.e., 3 geographical m., or 3·456 statute m. The French and other nations use the same nautical L., but the French had (until the introduction of the metrical system) two land-measures of the same name, the legal posting-league (2·42 Eng. m.), and the L. of 25 to the degree (2·76 statute English miles).

LEAGUE: generally, in the 16th and 17th c., a political alliance or coalition. The most famous leagues were those of Cambray, Schmalkald, Nürnberg, etc. But the term has peculiar importance in the history of France, as applied to the opposition organized by the Duke of Guise (q.v.) to the granting of the free exercise of their religion and political rights to the Huguenots. This L., known as the Holy League (*Sainte Ligue*), was formed at Péronne 1576, for upholding the Rom. Cath. religion in its predominance; but the object of the Guises was rather to exclude the Prot. princes of the blood from succession to the throne. For an account of the civil war that ensued, see **HENRY III.**: **HENRY IV.**: **GUISE**.—See Mignet *Histoire de la Ligue* (5 vols. Par. 1829).

LEAGUE, **ACHÆ'AN**: see **ACHAIA**.

LEAGUE, **ANTI-CORN LAW**: see **ANTI-CORN LAW LEAGUE**.

LEAGUER, n. *lēg'ēr* [Dut. *leger*, a lying-place, a lair: Ger. *lager*, a bed]: in OE., the lying-place of an army in the field; a camp; a siege.

LEAGUER, n.: see under **LEAGUE** 1.

LEAK, n. *lēk* [Icel. *leka*, to drip, to leak: Dut. *lek*, a leak; *lekken*, to leak: Ger. *leck*, a leak: L. *liquāri*, to melt away]: a hole or other defect which permits the passage of a liquid; the oozing out of a fluid through a hole or a joint: V. to let a liquid out of any vessel through a hole or defective part; to let water in through a joint or defective part, as a ship *leaks*. **LEAK'ING**, imp.: N. the oozing or passing of a liquid through a joint or an ap-

LEAKE—LEAN.

erture. LEAKED, pp. *lēkt*. LEAK'AGE, n. -*āj*, the liquid which escapes or enters by leaking; an allowance for liquid lost by leaking. LEAKY, a. *lēk'ī*, that admits a liquid, as water, to pass in or out. LEAK'INESS, n. -*nēs*, state of being leaky. To LEAK OUT, to find vent; to escape secrecy, as a fact or report. To SPRING A LEAK, to open or crack to such an extent as to allow the passage of water, generally said of the hull or shell of a ship.

LEAKE, *lēk*, WILLIAM MARTIN: 1777, Jan. 14—1860, Jan. 6; b. London: lieut.col. in the British army, and a traveller and antiquarian topographer. With remarkable critical acuteness and soundness of judgment, he combined great learning and an admirable power of clear statement. His principal works are—*Researches in Greece*, etc. (1814); *The Topography of Athens*, etc. (1821); *Journal of a Tour in Asia Minor, with Comparative Remarks on the Ancient and Modern Geography of that Country* (1824); *Travels in the Morea* (1830); *Travels in Northern Greece* (1835); and *Numismatica Hellenica* (1854).

LEAL, a. *lēl* [Norm. F. *leal*; OF. *leial*; F. *loyal*, true, loyal]: in *Scot.*, loyal; honest; faithful; true-hearted. LAND OF THE LEAL: see under LAND.

LEAMINGTON, *lēm'ing-ton*: fashionable watering-place in Warwickshire, England; one of the handsomest towns in the country; beautifully situated on the Leam, tributary of the Avon, about 2 m. from Warwick. It contains public gardens, a proprietary college, erected 1847 in the Tudor style, and other institutions. There are unusual social and educational advantages. In the centre of the town is a Pump Room, a handsome structure. L. is wholly of modern growth, having become important only in the present century. Its mineral waters are saline, sulphureous, and chalybeate. The watering-season is from Oct. to May. The town stands in the centre of a fine hunting-country, and is much resorted to by lovers of the chase. Pop. (1811) 543; (1871) 22,723; (1881) 25,138.

LEAN, a. *lēn* [AS. *hlæne*; Low Ger. *leen*, slender, lean: It. *leno*, lean, feeble]: thin; slender; not fat; bare: N. flesh or muscle without fat. LEAN'LY, ad. -*lī*. LEAN'NESS, n. -*nēs*, want of flesh; want of fat; thinness; poverty; want of spiritual power.—SYN. of 'lean, a.': meagre; slim; spare; skinny; gaunt; lank; bare-boned; barren.

LEAN, v. *lēn* [AS. *hlynian*; Ger. *lehnen*; Dan. *læne*; It. *lenare*, to bend toward]: to deviate or move from a straight or perpendicular line; to incline or tend toward; to rest against or upon. LEAN'ING, imp. LEANED, pp. *lēnd*. LEAN-TO, n. *lēn'tō*, a building, or part of one, of which the rafters lean on another building, or against a wall. To LEAN ON OR UPON, to trust to; to have confidence in.—SYN. of 'lean': to deviate; incline; bend; depend on; rest on.

LEANDER—LEARN.

LEANDER: see HERO.

LEAP, v. *lēp* [Icel. *hlaupa*, to run, to spring; *hleyppa*, to make a spring: Dut. *loopen*, to run]: to spring to, or rise from, the ground; to jump; to pass over with a spring or bound; to start; to fly: N. a jump; a spring; a bound; space passed by leaping; a sudden transition. LEAP'ING, imp.: ADJ. springing; bounding: N. act of jumping or skipping. LEAPED, pt. and pp. *lēpt*, did leap. LEAPER, n. *lēp'ēr*, one who leaps or bounds. LEAP'INGLY, ad. *-lī*. LEAP-FROG, a boy's game, in which one stoops down and another leaps over him. LEAP-YEAR [Icel. *hlaup-år*]: see below.

LEAP'ING-FISH (*Salarias tridactylus*): curious little fish of the Blenny family, abounding on the coast of Ceylon, and remarkable for leaving the water to visit places washed by the surf. By the aid of the pectoral and ventral fins, and the gill-covers, it moves across the damp sand, ascends the roots of mangroves, and runs up wet rocks in quest of flies. 'These little creatures are so nimble,' says Sir J. E. Tennent, 'that it is almost impossible to lay hold of them, as they scramble to the edge, and plunge into the sea on the slightest attempt to molest them.' They are three or four inches long, and of dark brown color.

LEAP-YEAR: a year of 366 days (see CALENDAR), so called because it leaps forward a day as compared with an ordinary year. It so happens that the leap-years coincide with the years that are divisible by four, and thus they may be known. Of the years concluding centuries, and known as the hundredth year, e.g., 1800, 1900, only every fourth is a leap-year, beginning with 2000; i.e., only those divisible by 400, e.g., 2400, 2800. The term *Bis-sextile*, applied by the Romans to leap-year, arose from their reckoning the 6th before the Kalends of March (Feb. 24) twice (*bis*), whereas we add a day to the end of the month, making it Feb. 29.

LEAR, or LEER, a. *lēr* [AS. *ge-lær*; Ger. *leer*, empty, void]: empty; destitute; void: N. an archway or long oven with a gradually decreasing heat, open at both ends, having sliding trays on which are placed finished glass articles for undergoing the process of annealing.

LEARN, v. *lérn* [AS. *læran*, to teach; *leornian*, to learn: Ger. *lehren*, to teach; *lernen*, to learn: Goth. *leisan*, to know]: to gain knowledge; to receive instruction or knowledge; to acquire skill in anything; to teach. LEARN'ING, imp. gaining knowledge; acquiring skill: N. knowledge acquired by instruction or study; literature. LEARNED, pp. *lérnd*, spelled also LEARNT, *lérnt*. LEARNED, a. *lérn'éd*, versed in the knowledge of classical authors and literature; versed in literature and science. LEARN'EDLY, ad. *-éd-lī*. LEARN'ER, n. *-ér*, one who is acquiring learning or knowledge. THE LEARNED, n. *lérn'éd*, men who have great stores of that knowledge which is gained by instruction and study from books.

LEARNED—LEASE.

TO LEARN BY HEART, to learn a thing so as to understand it. TO LEARN BY MEMORY, to gain a knowledge of anything without reference to understanding it. TO LEARN BY ROTE, to gain a familiar knowledge of a thing, simply with a view to repeating it as a parrot would do. —SYN. of 'learning': erudition; scholarship; knowledge; lore; letters; science; art.

LEARNED, *lér'něd*, EBENEZER: about 1728–1801, Apr. 1; b. Mass.: soldier. He entered the army at an early age; served as capt. through the French war 1756–63; raised the 3d Mass. regt. at the beginning of the revolutionary war; was commissioned brig.gen. 1777; took part in the relief of Fort Schüyler and commanded the centre in the battle of Stillwater; was with the army at Valley Forge; and resigned from ill health 1778, Mar.

LEASE, v. *lēz* [AS. *lesen*, to gather: Ger. *lesen*; Goth. *lisan*, to gather]: in OE., to gather after the harvest-men; to glean. LEAS'ING, imp. LEASED, pp. *lēzd*. LEASER, n. *lēz'ér*, one who gathers after harvest-men; a gleaner.

LEASE, n. *lēz* [F. *laissement*, the instrument by which a holding of any kind is let to a tenant—from F. *laisser*, to leave, to part with, to let: Ger. *lassen*, to let]: a letting of lands or houses for a certain number of years on certain conditions for a fixed rent; the contract of such letting (see below): any tenure, as a lease of life: V. to let for a number of years. LEAS'ING, imp. LEASED, pp. *lēst*. LEASE'HOLD, n. an interest on property held by lease; of much less value than a freehold estate, as a lease must come to an end, whereas a freehold estate may be held by a man and his heirs forever: ADJ. held by lease. LEASE'HOLDER, n. a tenant by lease: see LESSEE. LEASE AND RELEASE, form of conveyance of land anciently frequent in England, now superseded by a Grant.

LEASE: contract establishing the relation between Landlord and Tenant (q.v.). An improving L. is one in which the lessee agrees to keep the premises in repair. A building L. is one in which the tenant intends to build a house on the land: see BUILDING LEASE: GROUND-RENT. The party who leases is called the *lessor*, he to whom the lease is made the *lessee*, and the compensation or consideration of the lease is the rent. An *underlease* is a contract made by a lessee to another party for a portion of the estate or property held by the lessee under a L. from the owner; and the *term* is the duration of the L., both the beginning and ending being stipulated in the contract. A L. by *parole* is an oral agreement or one in writing not under seal; a L. by *deed* is an agreement in writing signed and sealed by both parties. Under the English statute of frauds (29 Charles II. c. 3) all leases exceeding three years in terms were required to be in writing. Ala., Ark., Cal., Conn., Del., Ill., Io., Kan., Ky., Mich., Minn., Miss., Mont., Neb., Nev., N. Y., R. I.,

LEASH—LEAT.

Tex., Utah, Or., Tenn., W. Va., Wyo., Va., and Wis. require all leases excepting those for one year to be in writing. Ga., Md., N. J., N. C., Penn., and S. C. hold to the English law; and Vt., O., N. H., Mo., Mass., Me., and Ind. declare all leases not in writing to be mere estates at will. In England all leases in writing must be under seal; while in Mass. and Md. all for more than seven years must be by deed, i.e., under seal; in Va. all for more than five; and in Del., R. I., and Vt. all for more than one. The power to lease depends on the extent of the lessor's estate in the property: if his rights are those vested in an estate for life the L. can only be co-extensive therewith: if the L. is for a term of years, the beginning and ending of the term must be ascertained to determine the lessor's right to lease for the term. If a tenant continues to hold over after the expiration of the term of his L., and the lessor makes no effort to remove him, the tenancy is at the will of either party, and remains so till after the payment and receipt of rent on account of a new tenancy, when it becomes a tenancy from year to year. After this neither party has a right to terminate it before the expiration of the current year on which they have entered, and then only after having given due notice of the intention to the other party. The *parts* of a L. by deed are (1) date; (2) names of the parties; (3) recitals of title; (4) the consideration or rent; (5) the operative words; (6) the description of the property; (7) the rights and liabilities of the respective parties; and (8) the conditions of forfeiture. See LANDLORD AND TENANT.

LEASH, *n.* *lēsh* [OF. *lesse*; F. *laisse*, a leash to hold a dog—from mid. L. *laxa*, a leash, a thong—from L. *laxus*, loose: Sp. *lazo*, a slip-knot]: in *falconry*, thong or line by which a hawk or a hound is held; a brace and a half; three animals, as of greyhounds, foxes, hares, etc.—the sense of *three* arising from that number usually being tied or leashed together. The L. is used in heraldry: V. to bind or hold by a string. LEASH'ING, *imp.* LEASHED, *pp.* *lēsh't*.

LEASING, *n.* *lē'zīng* [AS. *leas*, empty; *leasian*, to lie: Goth. *laus*, empty: Dut. *loos*, false]: in *Scrip.*, lies; falsehoods. LEASING-MAKING [see LEZE-MAJESTY]: in *Scots law*, seditious words: under ancient statutes (1584, 5) punishable with death: the penalty was long ago mitigated to fine and imprisonment, or both.

LEAST, *a.* *lēst* [see LESS]: superlative of *little*; little beyond all others; smallest: AD. in the lowest degree; in a degree below others. LEASTWAYS, or LEASTWISE, *ad.* *leāst*. AT LEAST, or AT THE LEAST, at the lowest; to say no more; in any or the smallest degree.

LEAT, *n.* *lēt* [Ger. *leiten*, to lead]: a trench or canal to conduct water to or from a mill; a small mill-race.

LEATHER.

LEATHER, n. *lèth'ér* [AS. *lether*; Icel, *lethr*; Ger. *leder*; W. *llethr*, leather]: prepared skins of animals: V. in *low language*, to beat or thrash—from *leathern belts* being sometimes employed as weapons in street quarrels. LEATH'ERING, n. a beating or thrashing. LEATHER, or LEATHERN, a. *lèth'érn*, made of leather. LEATH'ERY, a. *-ér-i*, resembling leather; tough.

LEATH'ER: essentially the skins of animals chemically altered by the vegetable principle called Tannin, or Tannic Acid (q.v.), so as to arrest that proneness to decompose characteristic of soft animal substances. Its invention reaches beyond the dawn of history, and was probably among the earliest steps of civilization; for as the skins of animals would naturally be among the first articles of clothing, any means of preserving them more effectually than by drying would be highly prized. The discovery that bark had this effect was doubtless the result of accident. The principle of its action was unknown till the present century; and the same unvarying method had been employed from the earliest times until the last few years, when the invention of new processes has much facilitated the manufacture.

The skins of all animals used in production of L. consist chiefly of gelatine, a substance which easily enters into chemical combination with the tannic acid found in the bark of most kinds of trees, and forms what may be termed an insoluble *tanno-gelatin*. This is the whole theory of tanning, or converting the skins of animals into leather. Formerly, oak-bark was supposed to be the only tanning material of any value; but lately, very numerous additions have been made to this branch of economic botany.

In addition to the process of tanning in making L., there are other modes, one of which is *tawing*, another *dressing in oil*. The following are the skins which form the staple of L. manufacture: ox, cow, calf and kip, buffalo, horse, sheep, lamb, goat, kid, deer, dog, seal, and hog.

The term *pelt* is applied to all skins before they are converted into leather. When simply made into L. in the state seen in shoe-soles, it is called 'rough leather;' but if, in addition, it is submitted to the process called currying, described below, it is termed 'dressed leather.'

The following trade-terms are in general use: hides or crop-hides, butts and backs, bends, offal, and skins. The complete hide is seen in fig. 1. The same rounded, with the cheeks, shanks, and belly-pieces, etc., pared off, is called a *butt*; the pieces cut off constitute the *offal*; and *skins* are all the lighter forms of leather, such as sheep, goat, deer, etc.

Besides domestic ox and cow-hides used in the manufacture, vast numbers are imported from Monte-Video, Buenos Ayres, Russia, and Northern Germany; also the E. Indies supply buffalo-hides in considerable numbers

LEATHER.

to Europe. The quantity of all sorts imported into Great Britain, 1881, amounted to 1,475,634 cwt.; and the entire value of the hides and leather (unmanufactured)

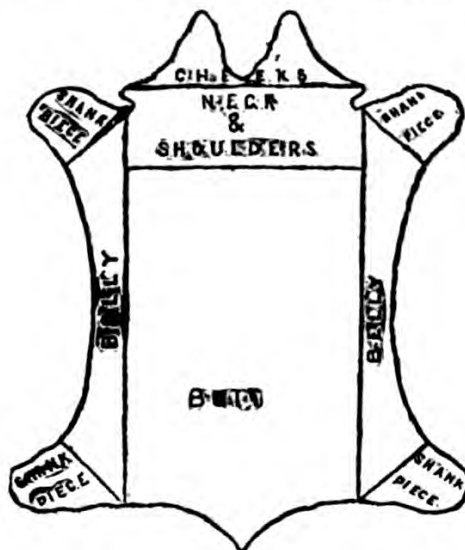


Fig. 1.

imported 1881 was as much as £6,366,639. These returns, however, comprise a considerable number of horse-hides, which also are sent from S. America. Calf-skins and kip-skins (skins of beasts older than calves, but not full-grown oxen) are, when tanned, used chiefly for the upper-leather of boots and shoes.

In 1880 there were in the United States 2,319 L.-currying establishments; using capital \$16,878,520; employing 11,053 hands; paying \$4,845,413 wages; using for materials 12,464,299 sides, 10,655,606 skins, and 3,385,719 gallons of oil; paying for materials \$59,306,509; and yielding in products 12,464,299 sides and 10,655,606 skins; value of products \$71,351,297. There were also 3,105 L.-tanning establishments; using capital of \$50,222,054; employing 23,812 hands; paying \$9,204,243 wages; using for materials 1,101,526 tons of hemlock bark, 353,245 tons of oak bark, sumac, and other materials valued at \$767,465, 11,773,171 hides, and 19,936,658 skins; paying for materials \$85,949,207; and yielding in products 23,546,342 sides and 19,917,653 skins; value of products \$113,348,336. Total: 5,424 establishments; \$67,100,574 capital; 34,865 hands; \$145,255,716 cost of materials; and \$184,699,633 value of products. The imports of L. and manufactures thereof during the year ending 1887, June 30, were in value \$10,933,570, and exports, including 30,530,488 lbs. of sole L. and 623,714 pairs of boots and shoes, \$10,436,138; and in the year ending 1888, June 30, the imports were in value \$11,671,497, and exports, including 28,713,473 lbs. of sole L. and 563,871 pairs of boots and shoes, \$9,583,411.

LEATHER.

Sheep and lamb skins are exported (in the wool) in large quantities from Australia and the Cape of Good Hope; and tanned, from the E. Indies. The latter skins, with the Cape skins, are used for bookbinding, furniture, gloves, etc. Lamb-skins are exported also from Italy, Sicily, and Spain, and tawed and dyed for making gloves, in imitation of kid. A great portion of all sorts of lamb and sheep-skins are tawed and used for masons' aprons, sewing harness, plaster-skins, tying up bottles, lining shoes, and other jobbing and inferior purposes.

Deer-skins are dressed by the oil process, and form a great portion of the so-called *shamoy* leather, named from the chamois of the Alps, from whose skin it was formerly made.

Dog-skins are tanned or tawed for gloves, and for thin shoes and boots. *Seal-skins* are manufactured into the so-called 'patent leather,' by varnishing their upper surface. The manufacture of this kind of leather has of late become important.

Hog or pig skins are exported from Russia and other European continental countries; their use is chiefly in the manufacture of saddles for horses, etc.

Walrus and hippopotamus hides are tanned in considerable numbers for the use of cutlers and other workers in steel goods, 'buffing-wheels' being made of them, often an inch thick, of great importance in giving the polish to metal and horn goods. Lately, belts for driving machinery have successfully been made from them.

Kangaroo skins of various species are tanned or tawed in Australia, and form a kind of leather in great favor for gentlemen's dress-boots.

The first process in making *tanned sole leather* is to soak the skins or hides in water for a greater or less time, to wash and soften them; they are then laid in heaps for a short time, and afterward hung in a heated room, by which means a slight putrefactive decomposition is started, and the hair becomes so loose as to be easily detached. This process of 'unhairing' is usual in America; but in Great Britain, milk of lime is used for soaking the hide till the hair loosens. Hides or skins intended for dressing purposes, such as shoe, coach, harness, or bookbinding, after the hair is taken off by lime, have to be submitted to a process called 'bating,' for reducing the thickening or swelling occasioned by the introduction of the lime, and for cleansing the skin from grease and other impurities. This is effected by working the skins in a decoction of pigeons' or dogs' dung and warm water, and no dressing-leather is ever submitted to bark or sumac without undergoing this process.

If the old method of *tanning* is followed, the hides, after unhairing, are placed in the tan-pits, with layers of oak-bark or other tanning materials between them; and when as many layers of hides and bark are arranged as the pit will hold, water is let in, and the hides remain to be acted upon by the tanning material for months, and

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even in some cases for years, being only occasionally turned. But this primitive process is now rare; so much improvement has been effected in the tanner's art since its chemical principles were discovered, that much less time suffices; and materials are now used which act so much more quickly than oak-bark alone, that even when the old process is used, it is greatly accelerated. The most useful of these materials are catechu and cutch (of which 9,000 tons are annually imported into Great Britain from India and Singapore), gambier (about 1,200 tons, from Singapore), divi-divi (3,000 tons, from Maracaibo, etc.), valonia (the acorns of the *Quercus Ægylops*, 25,000 tons of which are yearly imported from Turkey), and sumac leaves (16,000 tons, chiefly from Turkey).

The first attempts at improvement in tanning were by a method invented in England 1823, and an improvement on it 1831. The principle consisted in causing the *ooze* or *tan-liquor* to filter through the hides under pressure. For this purpose, the edges of the hides were sewed up so as to form a bag. The bags being suspended, were filled with cold tan-liquor, which gradually filtered through the pores of the hides, and impregnated them with the tannin. The processes by infiltration, however, have been entirely abandoned for heavy L., as they have the effect of rendering it porous and deficient in firmness.

Various patents for improvements in tanning have been in operation of late years. In one method hides were tied to each other to form a long belt, and pressed between rollers, to squeeze out the partially exhausted tan-liquor from the pores, so that a stronger liquor might be absorbed. An improvement on this mode was to attach the hides to a revolving drum, so that the hides press on each other on the top of the drum, but hang suspended in the tan-liquor from the lower part; and thus, by the hides being alternately in and out of the liquor, the tanning is quickly effected.

After the hides have become thoroughly tanned in the pit by the action of the tannic acid on their gelatinous substance, and when partly dried (if for 'struck' sole-leather), they are operated on by a two-handled tool with three blunt edges, called a pin (fig. 2, and section, *a*),

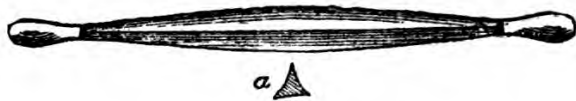


Fig. 2.

which, by being rubbed with great pressure backward and forward on the grain-side of the L. makes it more and more compact; and this is still further accomplished by submitting the L. to the action of a heavily loaded brass roller.

The tanning of goat-skins (from which morocco is made), sheep for imitation-morocco, and small calf-skins

LEATHER.

for book-binding, is done by sewing up the skins, and filling the bag with a warm decoction of sumac. They are kept in an active state for about 24 hours, which sufficiently saturates them.

A process patented in England within the last few years, converts the heaviest skins into L. in a very short time; but the process is tawing rather than tanning, and is used for machinery-belts principally.

Tawing consists in dressing the skins with antiseptic materials, to preserve them from decay; but by this operation no chemical change is effected in the gelatine of the skins; hence, tawed L. can be used in the manufacture of glue. In tawing, the first process is careful washing, next dressing the skins with lime, then removing the hair or wool, and lastly, steeping them in one or more of the various mixtures used for converting skins into L. by this method. The British method of tawing lamb-skins gives an idea of the process, which is, however, much varied, according to the kind of skin and the experience of the worker. Lamb-skins of British production are generally limed on the flesh side with cream of lime, which enables the wool to be easily pulled off. Dried lamb-skins are generally submitted to the *heating process*, for removal of the wool. The pelts, after being washed, are rubbed on the convex piece of wood called the *beam*; and when supple, the flesh-side of each skin is thickly besmeared with a cream of lime; and when two are so treated, they are laid with the limed surfaces in contact; and a pile of them being made, they are left for a few days, when they are examined by pulling the hair. If it separates easily, then the lime is washed out, and the hair is removed with the unhairing knife (fig. 3), as in the case of hides, unless it is required to

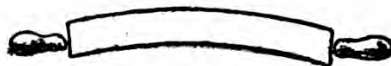


Fig. 3.

be kept on, as in the case of skins for door-mats, etc. After thorough cleansing, the pelts are steeped two or three weeks in a pit filled with water and lime, being taken out from time to time, and drained on sloping benches. When removed finally from the lime-pit, the skins are worked with the knife, to render them still more supple, and they are then put into the *brannine* mixture. This consists of bran and water, in the proportion of two lbs. of bran to a gallon of water. From this mixture, in about two days, they are transferred to another bath, consisting of water, alum, and salt. After the proper amount of working in this mixture, they undergo what is called the *pasting*, if intended to form white leather. The *paste* is a mixture of wheaten-bran and sometimes flour and the yolks of eggs. They are usually worked in a rotating cylinder with this paste and water, and are found in time to have absorbed the

LEATHER.

paste, leaving little more than the water. If the skins are not intended to be white, other materials are often used, and much pigeons' and dogs' dung is employed, some large leather-dressers expending as much as \$500 per annum for each of these materials. Lastly, the skins are dried and examined, and, if necessary, the pasting is repeated; if not, they are dipped into pure water and worked or staked by pulling them forward and backward on what is called a *stretching* or *softening* iron, and smoothed with a hot smoothing-iron.

Another kind of dressing is by treating the skin with oil. By hard rubbing with cod oil, or by the action of 'stocks,' after the skin has been properly cleaned with the lime, the oil works into the skin, displaces all the water, and becomes united with the material, rendering its texture peculiarly soft and spongy. Wash-leather or chamois leather is so prepared, and for this purpose the flesh-halves of split sheep-skins are chiefly used.

Besides *tanning* and *tawing*, many kinds of L. require the currier's art to bring them to the state of completion required for various purposes. The currier receives the newly tanned skins, and finds them harsh to the feel, and rough on the flesh side. He removes all the roughness by carefully shaving with a peculiar knife. After a soaking in clean water, he then scrapes the skin with considerable pressure upon a scraping-tool or *slicker*, and thus removes any irregularities. The moisture is then removed as much as possible, and oil, usually cod-oil and tallow, are rubbed over the L., which is laid aside to dry completely, and as the moisture leaves it, the oil penetrates. When quite dried and saturated with the oil, the skin is rubbed on a board with rounded ridges, by which a peculiar grained appearance is given, and the L. is rendered very pliable. In currying, almost every variety of L. requires some variation in the processes employed, but the currier's object is in all cases to give suppleness and fine finish to the skins.

Morocco leather, formerly an article of import from the Barbary coast, is now prepared in large quantities in Europe and America, from goat-skins; sheep-skins also are used for imitation. It is always dyed on the outer or grain side with some color, and the leather-dresser in finishing gives a peculiar ribbed or a roughly granulated surface to it, by means of engraved boxwood balls which he works over the surface.

Russia leather is much valued for its aromatic odor from the peculiar oil of the birch-bark used in tanning it. The fact that this odor repels moths and other insects, renders this L. particularly valuable for binding books; a few books in a library, bound in Russia L., being effective safeguards against insect enemies. It is said also to destroy or prevent the vegetable evil called mildew, to which books are so very liable.

LEATHER, VEGETABLE: composition whose base is supposed to be oxidized oil. It is spread over cotton

LEATHER-CLOTH.

or other cloth as a water-proof material for carriage-hoods, seats, gaiters, boots, etc. At present, it is made by a company which holds the secret of its manufacture. See LEATHER.

LEATHER-CLOTH, or ARTIFICIAL LEATHER: common name for coated or enamelled textile fabrics intended to possess some of the good qualities of leather, without being so costly. A material under this name was invented in the United States 1849; and many specimens of it were placed in the Great Exhibition, London 1851. In 1855 and since, large factories of it were established in England. The best American made stuff is preferred by consumers generally, even in England. Both American and English makes are much used for covering cheaper articles of furniture, instead of leather or haircloth; and for this purpose the better qualities last well. These dearer kinds do not exceed one-eighth of the price of morocco leather, and are also much cheaper than haircloth or sheep's-skin. Like floorcloth, or any other kind of fabric coated with oil-paint, American leather-cloth wears best in apartments not subject to extremes of heat and cold. Several varieties of enamelled or painted calico, more or less resembling the original leather-cloth, have at different times been made on a considerable scale, but none have been found so serviceable as the ordinary kind, so that they have speedily been withdrawn from market. There is a cheap kind of this enamelled cloth, more highly glazed than is usual for furniture, much used for covering trunks, making small sacks, valises, and the like.

The process of making L.-C. is in general the following, though with minor variations. Linseed oil is heated in large coppers to a certain high temperature, then removed to cool; then mixed with other ingredients, two of which are turpentine and lampblack. This composition is used as a kind of varnish to be applied to the surface of unbleached cotton. The cotton, woven to various widths and lengths, is calendered to make it smooth, and then passed over a roller; the composition is applied to it, and a peculiar kind of knife scrapes the layer to an equable thickness and a smooth surface. After being dried in a heated oven, the cloth is passed between rollers covered with pumice-dust, to rub the composition smooth. These processes are repeated four or five times. The cloth is next painted three or four times with a kind of enamel paint. Some kinds are grained like morocco leather, by being passed between rollers peculiarly grooved on the surface; others receive a pattern in relief by passing between embossing rollers.

Those kinds of imitation leather which consist essentially of calico or other woven fabric coated with a layer of india-rubber, previously dissolved by some solvent, such as naphtha, and mixed with other materials to give it body, are numerous, and pass under different names; but no real line of distinction can be drawn between

LEATHERWOOD—LEAVED.

them and the almost endless varieties of textile fabrics made waterproof by a thin layer of india-rubber. Few of these retain very long the properties they have when newly made. The vulcanized rubber eventually decays, or at least undergoes some change by which it loses its elasticity, and then it cracks, tears, or peels off.

L.-C. made on what is known as Seager's patent, is in fact leather, not cloth. It consists of leather parings and shavings, reduced to a pulpy mass, and moulded to any useful or ornamental forms. Le Jeune's *leather substitute* consists of a cement or mastic of caoutchouc or of gutta-percha on cloth, felt, or leather, pressed by rollers, and then pressed upon a layer of leather. By a peculiar splitting machine, a sheet is produced with an extremely thin layer of leather upon it. Spill's *vegetable leather* is made chiefly of caoutchouc and naphtha; the sheets being thickened to any degree by successive backings of canvas. The material is tough, resists damp, and takes a polish. Szerelmy's *leather cloth* is made by the application of oily pigments to cloth.

LEATHERWOOD (*Dirca palustris*): deciduous shrub, 3-6 ft. high, with the habit of a miniature tree, native of N. America; of nat. ord. *Thymeleaceæ*. The bark and wood are exceedingly tough, and in Canada the bark is used for ropes, baskets, etc. The leaves are lanceolate-oblong; the flowers are yellow, and appear before the leaves.

LEAVE, n. *lêv* [AS. *leaf*; Icel. *lof*, permission: Icel. *leyfa*, to permit: AS. *lyfan*, to permit]: grant of liberty; permission; a farewell; a formal parting. To TAKE LEAVE, to bid farewell. LEAVE'-TAKING, a bidding farewell—see LEAVE 2.—SYN. of 'leave': liberty; license; allowance; adieu.

LEAVE, v. *lêv* [Goth. *laiba*; AS. *laf*; Icel. *leifar*—from Icel. *leifa*, to leave: Gr. *loipos*, leavings, overplus—from *leipein*, to leave]: to withdraw or depart from; to quit; to cease; to abandon; to forsake; not to deprive of a thing; to suffer to remain; to reject; to bequeath; to give, as an inheritance; to permit without interposition, as I leave it to you; to cease to do; to desist. LEAV'-ING, imp. LEFT, pt. and pp. *lêft*, did leave. LEAVINGS, n. plu. *lêv'ingz*, refuse; offal; parts thrown aside or rejected. LEAVE AND LICENSE, in *law*, common defense in actions of trespass, in which claim is made that leave or permission was given to do the act complained of. To LEAVE OFF, to desist from; to forbear; to stop; to cease wearing, as a coat. To LEAVE OUT, to omit; to neglect. To BE LEFT TO ONE'S SELF, to be forsaken; to be permitted to follow one's own way: see LEAVE 1.—SYN. of 'leave': to desert; depart from; give up; resign; part with; desist from; forbear; relinquish; commit; intrust; permit; allow.

LEAVED, a. *lêvd* [from LEAF, which see]: furnished with foliage or leaves. LEAVES, *lêvz*, plu. of leaf.

LEAVEN—LEAVENWORTH.

LEAVEN, n. *lěv'n* [F. *levain*, yeast or ferment—from L. *levāmen*, alleviation, mitigation, in mid. L. sense, that which raises—from L. *levārē*, to raise]: sour dough, or dough in which putrefaction has begun, and which, owing to the presence and rapid growth or multiplication of the yeast-plant, quickly communicates its character to fresh dough with which it is mingled, hastening the process of fermentation which 'raises' the dough in a spongy form. The use of L. in baking dates from very remote antiquity; the use of yeast is more recent: see **YEAST: BREAD**. L. denotes also anything which makes a general change in the mass. **LEAVEN**, v. to ferment with leaven; to taint; to imbue, generally in a good sense. **LEAVENING**, imp. *lěv'n'ing*. **LEAVENED**, pp. *lěv'end*.

LEAVENWORTH, *lěv'en-wérth*: largest city in Kan., and co. seat of Leavenworth co.; on right bank of Missouri river, 500 m. from its mouth, 496 m. by river from St. Louis, 309 m. by rail. The Missouri bluffs form a crescent around the city, about 300 feet high, with its points upon the river. The city is built upon gentle slopes, which afford good drainage. It is laid out on the rectangular plan, its streets, mostly macadamized and well lighted, running n. and s., and e. and w.. In the business part the buildings are mostly of brick and iron, three and four stories high. It has many handsome residences, and among its churches are some fine edifices, notably the Rom. Cath. cathedral, one of the finest churches in the west. Fort L., 2 m. above the city, established 1827, is the headquarters of the milit. dept. of the Missouri, and the base of supplies for the western military points. The government reservation has good landings for steamboats, large barracks, officers' quarters, hospital, stables, storehouses, etc., and a fine parade ground, but no fortifications. The city is situated in a rich agricultural district, with apparently inexhaustible beds of bituminous coal. Its trade by river and rail is extensive, and an immense iron r.r. bridge crosses the river, while a paved levee borders on the river the entire length of the city. Six lines of railway center in L., viz., the Leavenworth branch of the Kansas Pacific, the Kansas Central, Missouri Pacific, Leavenworth Lawrence and Galveston, Chicago Rock Island and Pacific, and the Kansas City St. Joseph and Council Bluffs. Its first streets were laid out 1854; in 1864 its property was valued at \$4,103,562. Now it has a state normal school, the state penitentiary, a court house, 3 national banks (cap. \$600,000) and 1 savings bank, saw and grist mills, carriage and shoe factories, furniture manufactories, breweries, machine-shops, foundries, etc.; a graded public-school system; 26 churches; and about 18 newspapers and other periodicals, 6 daily, of which 2 are German, 1 tri-weekly, 5 weekly, of which 2 are German, and 6 monthly. Pop. (1880) 16,546, of which the govt. reservation contained 1,115; (1885) 29,268.

LEAVENWORTH—LEAVES.

LEAVENWORTH, HENRY: 1783, Dec. 10—1834, July 21; b. New Haven: soldier. He studied law, was admitted to the bar, and practiced; was appointed capt. in the 25th N. Y. inf. 1812, Apr., in the war with England; promoted maj. of the 9th inf. 1813, Aug., lieut.col. of the 5th U.S. inf. 1818, Feb., col. 1825, Dec., and brevetted brig.gen. 1824, July; commanded his regt. in the battles of Chippewa and Niagara Falls, and was wounded in the latter; was in command of an expedition against the Arickaree Indians on the Upper Missouri river; and founded several milit. posts on the w. frontier, including Fort Leavenworth, site of the present city of Leavenworth, Kan. (q.v.)

LEAVES (see **LEAF**. **LEAVINGS:** see **LEAVE 2**): organs of plants, springing from the sides of the stem or branches, generally more or less flat and green, never bearing flowers, and essential in the vegetable economy, as exposing the sap to air and light on their extensive surfaces. It is usually in the Axils (q.v.) of leaves that buds and branches are developed; and where there are buds and branches, L. are never situated outhewise than beneath them, though in the axils of many L. no development of bud or branch ever takes place. After its full development, a leaf retains its form and size unchanged till death. As to the duration of their life, L. exist either for one year—that is, during a year's period of active vegetation—in which case they are called *Deciduous* (q.v.), or for more than one year, when they are called *Evergreen* (q.v.).

A leaf appears first as a little conical body pushed out from the stem or branch. At first, it consists entirely of cellular tissue, continuous with the bark, but vascular tissue afterward generally appears in it. When fully developed, it usually comprises two parts: an expanded part, the *blade* or *limb*; and a stalk supporting this part, the *leaf-stalk*, or *petiole*, which sometimes assumes the form of a *sheath* of the stem, as in grasses. The leaf-stalk, however, is often wanting, in which case the leaf is called *sessile*; and when the base of the leaf embraces the stem, it is called *amplexicaul*. A leaf which has a leaf-stalk is called *petiolate*. Sessile L. often extend in wing-like prolongations down the stem, and are then called *decurrent*. They are sometimes *perfoliate*, entirely surrounding the stem with their base, so that it seems to pass through the leaf. Opposite L. are sometimes combined in this way. L. are called *simple*, when all their parts are united into one whole by a connected cellular tissue; they are called *compound*, when they consist of a number of distinct, completely separated parts, which are called *leaflets*.—As to the place where L. arise from the stem, they are either *radical* (root-leaves), when they arise from the very base—and many plants have radical L. only; or *cauline* (stem-leaves), when they arise from the *developed* stem or branches—the radical L. arising really from the stem; or *floral*, when they arise from the

LEAVES.

flowering axis.—As to their arrangement on the stem, L. are *verticillate*, or *whorled*, or *opposite*, or *alternate*, or *scattered*. Opposite L. are usually placed so that each pair is at right angles to those next above or below. All these modes of arrangement on the stem can be reduced either to the *whorl* or to the *spiral*; while by the tearing out of the whorl, the spiral arrangement arises, and the whorl by the compression of the spiral, but so that the whorl and the spiral are essentially the same. The number of L. requisite to form a complete *cycle*, or to encircle the stem, is very constant in the same species. In the Common Houseleek, the cycle consists of no fewer than 13 L., grouped together to form the *rosette* of this plant.

L. consist either exclusively of cellular tissue, as in mosses, or, usually, of cells and bundles of spiral vessels, as in the L. of trees and most other phanerogamous plants. The stronger bundles of vessels form *nerves*, externally conspicuous, the finer ramifications of which are called *veins*. In endogenous plants, the nerves of the L. run mostly in straight lines, and nearly parallel; whereas, in exogenous plants, a net-like ramification of the nerves prevails.

The L. of phanerogamous plants and ferns are covered with a well-developed separable *epidermis*, which extends over all their parts, and which is provided with numerous small pores—*Stomata* (q.v.)—sometimes on one, sometimes on both sides, serving for the absorption and exhalation of gaseous substances. Submerged L., however, and the under side of L. which float on the surface of water, have no stomata, no true epidermis, and no true vascular tissue.

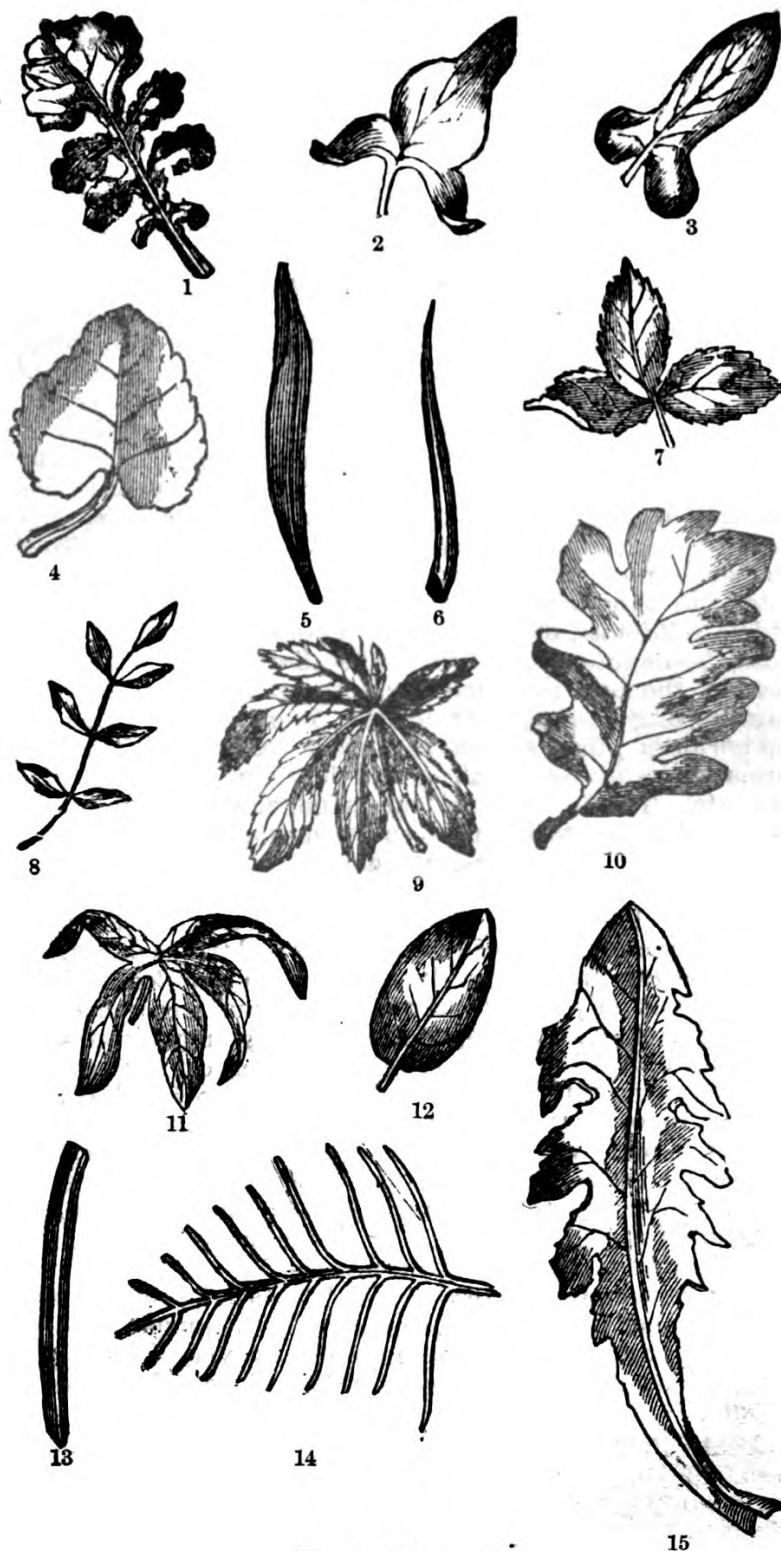
Some plants have no L., their functions being performed by the green juicy rind of the stalks, as in *Cactaceæ* and some of the genus *Euphorbia*; or by the general surface of the Thallus (q. v.) in many acrogenous plants.

It is chiefly in the L. of plants that the elaboration of the sap takes place, and when a tree is deprived of its L., no wood is formed until they are again developed. The incessant removal of L. as they are formed destroys a plant, and this method is sometimes advantageously adopted as to weeds having deep or spreading perennial roots, and otherwise difficult of extirpation.

L. exhibit more or less decidedly a periodical alternation in their direction and expansion, generally corresponding with the alternation of day and night. Some exhibit peculiar irritability under various influences, and those of two or three species of plants, by their closing together, catch and kill insects which alight on them, in which, however, no relation to the vegetable economy is known: see IRRITABILITY IN PLANTS: SLEEP OF PLANTS: DIONÆA.

The forms of L. are extremely various. *Simple* L. vary from a form almost perfectly circular, or even

LEAVES.



Forms of Leaves.

1, lyrate; 2, sagittate; 3, hastate; 4, cordate; 5, lanceolate; 6, subulate; 7, ternate; 8, impari-pinnate; 9, digitate; 10, sinuate; 11, palmate, or quinate; 12, ovate; 13, linear; 14, pectinate; 15, runcinate.

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broader than long, to an extreme elongation, as *linear* or *filiform* (thread-like). The breadth of some increases toward the apex, and this is indicated by the terms *obovate*, *obcordate*, etc., and sometimes by the word *inversely* prefixed to the term which describes the form. Simple L. are either *entire*, or they are more or less deeply *toothed* or *serrate*; or they are *cut* or *lobed* by divisions extending from the margin toward the base; or the division may extend toward the midrib of the leaf, when the leaf is *pinnatifid*, or *sinuate*, or *runcinate*, etc. The accompanying figure exhibit some of the forms of L., and explains some of the terms used in describing them. Similar terms are employed as to the leaflets of compound L., but the variety of forms is not nearly so great. Compound L. exhibit two chief varieties of form, according as the divisions which form the leaflets extend toward the base of the blade, or toward the midrib. Of the former class are *ternate*, *quaternate*, *quinate* leaves, etc., the latter are called *pinnate* leaves. But the same mode of division may be repeated in the leaflets, and thus a leaf may be *biterminate*, or, if again divided, *triternate*, etc., and very many leaves are *bipinnate*, *tripinnate*, etc. When the division is often repeated, the leaf is called *decompound*. A pinnate leaf, terminating in a pair of leaflets, is called *pari-pinnate*, or *abruptly pinnate*; but a pinnate leaf very often terminates in an odd leaflet, and is then called *imparipinnate*. The blade of a leaf is generally in the same plane with the stalk, but is sometimes at right angles to it, as in *orbicular* and *peltate* leaves.

The *Vernation* (q.v.) of L., or the manner in which they are folded in bud, is, like the *æstivation* of flowers, very characteristic of different plants and tribes of plants.

Root-leaves are generally larger than *stem-leaves*, but are present only in herbaceous plants, and are generally the first to fade. The upper stem-L. are generally smaller and less divided than the lower, those nearest the flowers often passing into bracts. By metamorphosis of L., all bracts, involucre, etc., are produced, and all the different parts of flowers, as calyx, corolla, stamens, carpels, therefore even fruits; and the mode of their arrangement relatively to the axil corresponds with that of leaves. All organs formed by metamorphosis of L. are called *leaf-organs*. See MORPHOLOGY.

Seed-leaves are the cotyledons of the seed, raised above ground after germination, and serving the purposes of L. to the young plant, though generally very unlike its future leaves. This, however, takes place only in some plants.

LEAVITT, *lēr'it*, JOSHUA, D.D.: 1794, Sep. 8—1873, Jan. 16; b. Heath, Mass.: Congl. minister. He graduated at Yale 1814; was admitted to the bar 1819; practiced in Heath and Putney, Vt.; abandoned his practice to study theol. 1823; graduated at Yale Divinity School 1825; and was pastor of a Congl. church in Stratford,

LEAVY—LEBANON.

Conn., 1825-28. In 1828 he removed to New York and became sec. of the American Seamen's Friend Soc., and editor of the *Sailor's Magazine*; 1831 became editor and proprietor of the *New York Evangelist*, which he conducted successfully till the panic of 1837; 1837-48 was editor of the *Emancipator*, and part of the time editor and proprietor of *The Chronicle*, both in Boston; and from 1848 till his death was editorially connected with the *New York Independent*. He established one of the first Sunday schools in w. Mass.; organized sailors' chapels in several American and foreign ports; founded the first city temperance soc. in New York; aided in organizing the N. Y. Anti-Slavery Soc., and was a member of the executive committee of the National Soc. He received a gold medal from the Cobden Club of England for a free-trade essay on the commercial relations of the United States and Great Britain 1869.

LEAVY, a. *lēvʹ*: an OE. spelling for LEAFY.

LEBANON, *lēb'a-non*: borough of Penn.: county seat of L. co.; on the old Union canal and the Lebanon Valley r.r.; terminus of the Cornwall and Lebanon r.r., which connects it with the Cornwall ore mines about 7 m. s., and with Lancaster about 26 m. s. It is 86 m. from Philadelphia. The Lebanon and Lancaster r.r. also has its terminus there. L. was laid out 1750, incorporated 1820. It has 8 newspapers, 2 dailies, and 6 weeklies, 2 of the latter being German. It is the centre of an iron mining district, and 6 m. away there is a quarry of gray marble. The principal industries are the manufacture of iron implements and castings, engines and boilers, carriages, machinery, and railroad cars. It has 8 large furnaces, and manufactures paper, organs, stoves, hollow-ware, and bells. It has 3 national banks, 1 trust co., and 1 state bank, excellent public schools, and fine churches, a handsome court house, and other public and private buildings. The strongest churches are Lutheran, Reformed, Rom. Cath., United Brethren., Prot. Episc., Presb., Meth., and Evangelical Association. Pop. (1830) 8,778.

LEBANON: city, cap. of Wilson co., Tenn.; on the Nashville Chattanooga and St. Louis r.r.; 6 m. s. of the Cumberland river, 30 m. e. of Nashville. It is in a richly productive farming region; does large business in shipping cotton, grain, tobacco, flour, mules, hogs, and woolen goods. It is the seat of Cumberland Univ. (organized by the Cumberland Presb. Church 1842), which had (1836-7) 5 professors and instructors; 85 students; 4 endowed professorships; 3,000 bound vols. in the library; \$30,000 invested in grounds, buildings, and apparatus; \$20,000 in productive funds; and which conferred 12 degrees at last commencement. Its departments include law, theol., and engineering. Nathan Green, LL.D., was chancellor 1886-7. Pop. of L. (1870) 2,073; (1880) 2,296.

LEBANON—LEBEDIN.

LEBANON, *lëb'a-non*, MOUNT, or JEBEL LIBNAN, *jëb'-ël lib'nan* [from Semitic *laban*, to be white]: western and higher of two mountain-ranges which traverse Syria from n. to s. parallel with the coast of the Levant. Its average height is about 7,000 ft., but its loftiest peak, Dahrel-Khotib, in the range called Jebel Makmel, attains 10,050 ft. For six months of the year, this mountain is covered with snow.—The next highest point is Jebel Sunnin, 8,555 ft. The road from Baalbek to Tripoli crosses L. at an elevation of 7,330 ft. From the w. side of the range, several spurs strike off across the narrow strip of level coast, and project upon the Levant in bold promontories. In the s. are the sources of the Jordan, the most important river that rises in L.; not far from Dahrel-Khotib, those of the Orontes, next largest stream, flowing northward, and intersecting the chain at Antaki (*Antioch*). L. derives its name, not from the snow that whitens its peaks, but from its whitish chalk cliffs. The vegetation of L. is, on the whole, scanty; here and there, woods and willow-groves are seen; the lower parts of the mountains, however, are everywhere well watered and cultivated, and the valleys are often covered with orchards, vineyards, olive and mulberry plantations, and cornfields. The habitable districts are mostly in the possession of Maronites (q.v.) and Druses (q.v.). Everywhere the range of L. is wild and solitary; almost the only sound that falls on the ear of the traveller is the scream of the eagle. Numerous monasteries offer comfortable accommodation to the weary traveller at the close of almost every day's wanderings. The once famous Cedars of L. have almost disappeared; only a solitary grove remains: see CEDAR OF LEBANON.

ANTI-LIBANUS (improperly *Antilebanon*) (Heb. *Jebel-esh-Sherki*), is the eastern of the two ranges; it is less compact, and its average height inferior. The great plain between the two is known as Coele-Syria (q.v.). Anti-Libanus terminates southward in Mt. Hermon, its highest point, 8,376 ft. Exclusive of its southern offshoots it is 67 m. long, and 13½ to 16 m. wide. Its sides are clothed with green poplar-trees, but it has no cedars. On its table-lands are found numerous little lochs or tarns, characteristic feature of this range, and distinguishing it from Mt. Lebanon.

LEB'ANON SPRINGS: post village, summer resort in New Lebanon tp., Columbia co., N. Y.; 25 m. s.e. of Albany. It is noted for its thermal springs, one of which has a uniform temperature of 70° F. at all seasons, discharges 16 barrels of water per minute, supplies several baths, and furnishes motive power to a number of factories. There are several hotels for tourists and invalids. Pop. (1880) tp. 2,245; village, 300.

LEBEDIN, *lëb-â-dën'*: town of Little Russia, govt. of Kharkov, 90 m. n.w. of the town of Kharkov, lat. 50°

LEBEDYAN—LECCE.

35' n., long. 34° 30' e. It was founded in the 17th c. The inhabitants manufacture girdles and sashes to the annual value of many thousand roubles. These articles, which are worn by the Russian peasants, are sent for sale to Moscow, and to the fairs of Nijni-Novgorod, Kursk, etc. Pop. (1880) 17,000.

LEBEDYAN, or LEBEDIAN, *lěb-ā-dē-ān'*: district town of Great Russia, govt. of Tambov, 100 m. w.n.w. of the city Tambov, on the Don, lat. 53° n. It has two annual fairs, the commercial transactions of which amount to \$3,500,000. One of the chief articles of sale is horses; and govt. officers frequent the fairs of L. to procure horses for the cavalry regiments. Pop. (1880) 6,010.

LEBRIJA, or LEBRIXA, *lā-brě'chā* (anc. *Nebrissa-Veneria*): town of Spain, province of Seville, 34 m. s. by w. from Seville, on an affluent of the Guadalquivir, and on the railway between Seville and Cadiz. It is pleasantly situated on a slight eminence, which overlooks a plain liable to be overflowed by the Guadalquivir and its branches. A large church, originally a mosque, exhibits a strange combination of the Arabic, Roman, and Gothic styles. L. is famous for its oil. There are manufactures of woolen cloth, hempen fabrics, glass, pottery, bricks, tiles, and soap. Pop. 12,000.

LEBRUN, *lěh-brŭng'*, CHARLES: 1619, Feb. 24—1690, Feb. 22; b. Paris: painter. He studied in the school of Vouet, and afterward at Rome, under Poussin, for six years, returning to France 1648. He became principal court-painter to Louis XIV., who greatly favored his pompous and striking style. L.'s best works are a series of pictures representing the battles of Alexander, felicitously engraved by Gérard Audran. L. belongs to the classical and artificial school, but he is a favorable specimen of it. His works were almost incredibly numerous: many were on a great scale, as at the Louvre and Versailles.

LECANORA, n. *lěk'ā-nō'rā* [Gr. *lekānē*, a dish, a basin]: a genus of lichens comprising some valuable plants, so named in allusion to the form of the shields: *Lecanōra tartārēā*, a species which supplies the dye cudbear. LEC'ANO'RIC ACID, *-rĭk*, or LECANO'RINE, or LECANO'RIN, n. *-rĭn*, an acid used for the production of pigments, found in the lichen *Roccella tinctoriā* and the *Lecānōrā*.

LECCE, *lět'chā*: chief town of the province of L., s. Italy, 10 m. from the Adriatic, 25 m. s.s.e. of Brindisi. It is the Lupice of the ancient Salentines, the name having become Lycia in the middle ages, and hence Lecce. It contains fine churches and public edifices, whose architecture is enhanced by the beauty of the fine white stone found in abundance in the neighborhood, which admits of exquisitely minute cutting. L. has large trade in olive-oil. Pop. (1881) 21,742.—The province of L. has 3,292 sq. m.; pop. 554,418: it was called formerly OTRANTO, TERRA DI (q.v.).

LECHE—LECOMPTON CONSTITUTION.

LECHE, n. *lē-chē'*: an antelope of the genus *Eleotragus*. It is a water antelope, frequenting damp places and swamps. It allows its horns to recline, almost touching the withers.

LECHEROUS, a. *lēch'ēr-ūs* [OF. *lescheur*, a glutton, an adulterer—from *lescher*, to lick: F. *lécherie*, to gormandize; *lécher*, to lick]: addicted to debauchery; lustful; provoking lust. **LECH'EROUSLY**, ad. -*lī*. **LECH'EROUSNESS**, n. -*nēs*, or **LECH'ERY**, n. -*ēr-ī*, lewdness; the indulgence of lust. **LECHER**, n. *lēch'ēr*, in *OE.*, a man addicted to lewdness: V. to commit lewdness.

LECH'FORD, THOMAS: d. in England about 1645. He was a lawyer in London, emigrated to Boston 1638, and was the first legal practitioner in New England. Disliking the colonial management, he returned to England 1641, and published *Plaine Dealing, or News from New England's Present Government*, etc. (reprinted by J. Hammond Trumbull, 1867, with introduction and notes). If due allowance be made for its unfriendly spirit, it is of some value in the study of New England History.

LECITHIN, n. *lē's'ī-thīn* [Gr. *lek'ithos*, yolk of an egg]: one of two complex substances found in the brain, nerves, etc.—the other being *cerebrin*. **LECITHOUS**, a. *lē's'ī-thūs*, yellow-colored like the yolk of an egg.

LECKY, *lēk'ī*, WILLIAM EDWARD HARTPOLE: philosophical and historical writer: b. near Dublin, 1838. Mar. 26. He graduated at Trinity College, Dublin 1859; applied himself to literature; published anonymously *The Leaders of Public Opinion in Ireland* (1861, repub. 1871-72); spent some time in European travel; and after settling in London brought out a *History of the Rise and Influence of the Spirit of Rationalism in Europe*, 2 vols. (1865; 5th ed. 1872). This was followed by *History of European Morals from Augustus to Charlemagne*, 2 vols. (1869), and parts of *History of England in the Eighteenth Century* (vols. I. II. 1878; III. IV. 1882). All these works have been translated into German and republished in the United States, and his *History of European Morals* has been adopted as a text-book in several German universities and gymnasia. He has lectured before the Royal Institution on *The Influence of the Imagination in History*, and 1886 created considerable astonishment by his intense opposition to the Home Rule movement.

LECOMPTON CONSTITUTION: frame of government for Kansas, adopted by an illegally constituted convention at Lecompton, 1857. The attempt was made to impose it upon the people of Kan. by violent measures. The convention was composed of persons known to be in favor of slavery, elected by men from Missouri who took possession of the polls. A large majority of the Kan. settlers were opposed to slavery, and if the government had kept out the men from Mo., or its officers had not encouraged the intruders, Kan. would have been organized as a 'free state.' The L. C. declared the right

LE CONTE.

of slave-holders to be inviolable, and prohibited the legislature from emancipating slaves. Gov. Walker denounced it as a fraud, but the people were permitted to vote on the question whether they would have the constitution with or without slavery, it having, however, been so arranged that slavery would be fastened on the state in either case. It was submitted to the ballot 1857, Dec. 21. The number of votes returned for the constitution 'with slavery' was 6,226, most of them being from counties along the Mo. border where there were only 1000 legal voters. For its adoption 'with no slavery' only 569 votes were returned; very many of the free-state party, however, would not vote, saying that it was all a fraud. The territorial legislature then submitted the L. C. unreservedly to the people, 1858, Jan. 4, when there was a majority of 10,226 against it. It was carried to congress, which recommended another election on Aug. 3, when it was again defeated by 10,000 majority. This ended the struggle for the establishment of slavery in Kan. An anti-slavery constitution was legally adopted, 1859; and Kan. was admitted as a free state, 1861, Jan. 29.

LE CONTE, *lè kōnt*, JOHN, M.D., LL.D.: physicist: b. Liberty co., Ga., 1818, Dec. 4; son of Lewis L. C., M.D. He graduated at Franklin College, now Univ. of Ga., 1838, and at the New York College of Physicians and Surgeons 1841; began practicing medicine in Savannah 1842; was elected prof. of nat. philos. and chemistry in Franklin College 1846; was lecturer on chemistry in the New York College of Physicians and Surgeons 1855; became prof. of nat. and mechanical philos. in S. C. College 1856, prof. of physics and industrial mechanics in the Univ. of Cal. 1869; was pres. of the univ. 1875-81; and since 1881 has been prof. of physics there. In 1857 he delivered a course of lectures on the *Physics of Meteorology* at the Smithsonian Institution; 1867 a lecture on the *Stellar Universe* at the Peabody Institute, Baltimore; 1878 was elected a member of the National Acad. of Sciences; and 1879 received the degree LL.D. from the Univ. of Georgia. He has published *Philosophy of Medicine* (1849); *Study of the Physical Sciences* (1858); and *The Nebular Hypothesis* in the *Popular Science Monthly* (1873, Apr.). A nearly completed treatise on *General Physics* was destroyed in the burning of Columbia, S. C., 1865.—His brother, JOSEPH L. C., M.D., LL.D., b. Liberty co., Ga., 1823, Feb. 26, graduated at the Univ. of Ga. 1841, graduated in medicine in New York 1845, and studied nat. sciences and geology with Prof. Agassiz in Harvard College 1850; held various professorships; and since 1869 has been prof. of geology and nat. history in the Univ. of Cal. at Oakland. He has published numerous geological works.—His cousin, JOHN LAWRENCE L. C., M.D., 1825, May 13—1883, Nov. 15, b. New York, son of John Eatton L. C., after graduating at the New York College of Physicians and Surgeons 1846, spent

LECOTROPAL—LECTION.

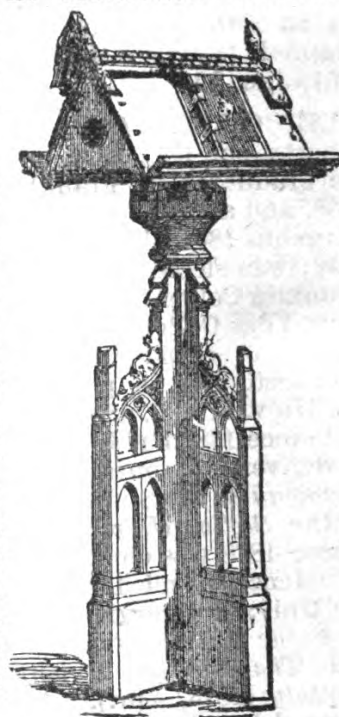
several years travelling, exploring, and studying nat. history; served in the Union army during the civil war and became medical inspector and lieut.col.; and was chief clerk in the Philadelphia mint from 1878 till his death. He was one of the most eminent entomologists of his day, and a member of numerous scientific societies.

LECOTROPAL, a. *lě-kōt'rō-pāl* [Gr. *lekos*, a dish; *tropē*, a turning]: in *bot.*, shaped like a horse-shoe, as some ovules.

LE CREUZOT: see CREUZOT, LE.

LECTERN, n. *lěk'těrn*, or LECTURN, n. *-těrn*, and LETTERN, n. *lět'těrn* [OF. *lectrin*, and *letrin*; F. *lutrín*—from mid. L. *lectrīnum*, a reading desk, a choir desk—from L. *lectus*, a couch: Gr. *lektron*, a couch, a rest for a book]: reading-desk or stand for the larger service-books used in the Rom. Cath. Chh. service; in the *Chh. of England*, the desk in the choir whence the lessons are read. *Note.*—LECTERN has no connection with *lecture* etymologically, though at present closely identified with it both in spelling and in the actual meaning attached to it of 'a reading-desk.'

The L., which properly is movable, is of very ancient use, of various forms and different materials. The most ancient lecterns are of wood, a beautiful example of which is that of Ramsey Church, Huntingdonshire (about 1450); but they were frequently of brass, and sometimes in the form of an eagle (the symbol of St. John the Evangelist), the outspread wings of which form the frame supporting the volume.—In some parts of e. Scotland, the precentor's desk in the Presb. churches is called the *lettran*.—The L. is in use as a convenience in some churches of other denominations.



Lectern.

LECTION, n. *lěk'shūn* [L. *lectiō* or *lectiōnem*, a reading, as of a book—from *lectus*, gathered, read]: a difference or variety in some passages of the words in copies of the same MS. or book; a reading; a portion of Scripture read in divine service. LECTONARY, n. *-ěr-ī* [Lat. *Lectio-narium*]: one of the service-books of the mediæval church, so called because it contained the lessons (*lectiones*) of the church-service. Of these there are two which are noticeable. The first is the so-called 'Roman Lectionary,' which contained the epistles and gospels of

LECTURE—LECTURESHIP.

the Roman missal, and sometimes all the lessons of all the various services in use in the Roman Church, in which case it was named the *Plenarium*. The most ancient form of the Roman Lectionary was called 'Comes' or 'Liber Comitis.' Its compilation was attributed to St. Jerome, and it appears certain that it belongs in substance, though not in form or in details, to his times. The collection was revised and remodelled in the 8th c. The second of the ancient Lectionaries is that known as the Gallican Lectionary, published by Mabillon from a MS. of the monastery of Luxeuil, and believed to represent the rite of the ancient Gallican Church, chiefly because one of the few saints' offices which it contains is that of St. Geneviève. LECTOR, n. *lĕk'tĕr* [L.]: a reader of Scripture in church.

LECTURE, n. *lĕk'tūr* or *lĕk'chūr* [F. *lecture*—from mid. L. *lectŭrā*, a reading: Sp. *lectura*, a reading, a lecture—from L. *lectus*, read; *lego*, I read]: a discourse read on any subject; a formal discourse intended to instruct; a formal reproof; pedantic discourse; V. to instruct formally or dogmatically; to instruct by formal discourse or explanation, as an audience or a class of students; to reprove. LECTURING, imp.: N. the act of one who lectures. LECTURED, pp. *-tŭrd* or *-chŭrd*. LECTURER, n. *-tŭr-ĕr* or *-chŭr-ĕr*, one who instructs by lecturing; a preacher. LECTURESHIP, n. office of a lecturer: see below.

LECTURESHIP: permanent establishment of lectures in series, whose financial basis is provided usually by gift or bequeathal. Well-known English examples are the *Bampton*, the *Boyle*, and the *Hulsean Lectures* (see these titles).—The *Merchants' Lectures* were instituted London 1672 by Congregationalists (then known as Independents) and Presbyterians, to maintain the essential Prot. doctrine against Romanism, Socinianism, and infidelity; the funds were provided by leading merchants, and the lectures were by distinguished men, and were delivered in Pinner's Hall. Later the two denominations separated. The Congl. ministers of London deliver the lectures monthly in rotation in their chapels, a course on a given subject being completed in a year or two.—The *Congregational Lectures* in London are an annual theological series by British Congl. ministers.—The *Hibbert Lectures* were founded London 1878 in the interest of liberal and advanced thought.—The *Dudlean Lectures* at Harvard Univ. were founded for defense of Christianity, by a lawyer, Paul Dudley (1675–1751); they have been continued till within a recent period.—The *Lyman Beecher Lectureship* in Yale Univ. is a course on preaching, founded by Henry W. Sage, then of Brooklyn, now of Ithaca, N.Y.: the first course was delivered 1872 by Henry Ward Beecher.—The *Ely Lectures* in Union Theol. Seminary (Presb.) are on a foundation provided by Zebulon Stiles Ely of New York.—The *Stone Lectures* in Princeton Theol. Seminary were founded by Levi P.

LECYTHIDACEÆ—LEDGER.

Stone of Orange, N. J.—The *Vedder Lectures* are a course on the cause and cure of modern infidelity, at the Theological Seminary (Ref. Dutch), New Brunswick, N. J.—The *Bohlen Lectures* are a course at the Church of the Holy Trinity (Prot. Episc.), Philadelphia, established 1878.—All the above lectureships are well known as supplying lectures of the highest order from men of acknowledged eminence, and in most cases the courses appear in volumes which have permanent value. There are also other lectureships of high repute.

LECYTHIDACEÆ, *lē-sīth-i-dā'sē-ē*: nat. ord. of exogenous plants, or sub-order of *Myrtaceæ*, the distinguishing characteristic being that the fruit is a large woody capsule, with a number of cells, which in some species remains closed, and in some opens with a lid. All the known species, about 40, are natives of the hottest parts of S. America. All are large trees. They have alternate leaves, and large showy flowers, solitary, or in racemes. The stamens are numerous, and a portion of them sometimes connected into a kind of petal-like hood. Brazil-Nuts (q.v.) and Sapucaia Nuts (q.v.) are the seeds of trees of this order. The Cannon-ball Tree (q.v.) belongs to it. The capsules of some species are known as *monkey-pots*. Monkeys are very fond of the seeds.

LED, v. *lēd*: pt. and pp. of the verb LEAD, which see. LED-HORSE, a sumpter-horse. LED-CAPTAIN, a humble and obsequious follower.

LEDA, *lē'da*, in Grecian Mythology: wife of the Spartan king Tyndareus. The legend was that Jupiter visited her one night in the disguise of a swan, and she became mother of Castor and Pollux, and after her death, was raised to a divinity under the name of Nemesis. The story has supplied a theme for many works of art.

LEDBURY, *lēd'bér-ī*: small town of England, co. of Hereford, 14 m. e.s.e. of the city of Hereford, on the Hereford and Gloucester canal. Glove-making is the principal industry. Pop. 3,000.

LEDEN, or LEDDEN, n. *lēd'ēn* [AS. *lyden* or *leden*, the Latin language in general, a corrupt spelling of Latin: comp. Icel. *hlíod*, the sound of the voice]: in OE., speech; language; true meaning.

LEDGE, n. *lēj* [Icel. *logg*; Sw. *lagg*; Scot. *laggen*, the projecting rim at the bottom of a cask]: a narrow strip standing out from a flat surface; a ridge of rock in the sea near the surface of the water; a prominent part; a small molding; a row; a layer. LEDGER, a. *lēj'ēr*, applied in music to extra lines added to the staff—but LEGER is the proper spelling: see LEGER-LINES.

LEDGER, n. *lēj'ēr* [OE. *leiger* or *ledger*, a resident appointed to guard the interests of his master at a foreign court, an object that lies permanently in a place: Dut. *legger*, he who remains permanently in a certain place: Dut. *legger*, the nether millstone—from O.Dut. *leggen*, to

LEDGER-LINE—LEDRU-ROLLIN.

lie]: *literally*, a business book which always lies ready in a fixed place; the principal book of accounts in a merchant's office, to which the entries from the day-book or journal are carried and placed under separate headings; in *OE.*, a horizontal slab of stone. LEDGER-LINES, in Music, see LEGER-LINES.

LEDGER-LINE, in Fishing: a kind of tackle, consisting of a bullet or piece of lead with a hole through the centre; through which a gut-line is threaded, having at its end a hook. About 18 or 20 inches above the hook, a shot or bead is fastened firmly to the line, to prevent the lead from slipping down the line nearer to the hook. The hook being baited, the tackle is then cast into the water. The lead rests on the bottom, and the line is kept tight, but without lifting the lead from the bottom. The moment a fish bites at the bait, it is felt by the angler, who immediately gives a strong pull or strike. This method of fishing is used chiefly for barbel or bream.

LEDRU-ROLLIN, *lêh-drû'rôl'în*, F. *lêh-drû-rol-lâng'*, ALEXANDRE AUGUSTE: noted French democrat: 1807, Feb. 2—1874, Dec. 31; b. Fontenay-aux-Roses; grandson of a celebrated quack doctor of the reign of Louis XV. He studied for the bar, to which he was admitted 1830. He was counsel for the defense in most of the prosecutions of opposition journals during the reign of Louis Philippe, and obtained great reputation among the lower orders. In 1841, he was elected deputy by the dept. of Sarthe, and became prominent in the extreme Left. In 1846, he published an *Appel aux Travailleurs*, in which he declared 'universal suffrage' the only panacea for the miseries of the working-classes. He was also an ardent promoter of the reform-meetings that preceded the crash of 1848. On the outbreak of the revolution, he advocated the formation of a Provisional Government, and when this was carried out, was intrusted with the portfolio of the interior. He was afterward one of the five in whose hands the national assembly placed the interim government. In this high position he showed lack of perception, firmness, and energy. In consequence of the insurrection of 1848, June, he ceased to hold office, and then sought to recover (what he had lost by accepting office) his influence with the extreme democrats. He partially succeeded, and even ventured on a candidature for the presidency, but obtained only 370,119 votes. The unsuccessful *émeute* of 1849, June, put an end to L.-R.'s political rôle. He fled to England, and in less than a year not very politely published a work against the land which had given him asylum, *De la Décadence de l'Angleterre*. For the next 20 years he lived alternately in London and Brussels. His name was excepted from the amnesties of 1860 and 69; but in 1870, a decree having been published permitting him, he returned to France. In 1871, Feb., he was returned to the national assembly, but at once resigned.

LEDUM—LEDYARD.

LEDUM, n. *lē'dūm* [Gr. *lēdon*, a species of *Cistus*]: genus of plants, of nat. ord. *Ericææ*, sub-order *Rhodoreæ*, consisting of small evergreen shrubs, with comparatively large flowers, of which the corolla is cut into five deep petal-like segments. The species are natives of Europe and N. America; some are common to both. The leaves of *L. latifolium* are said to be used in Labrador as a substitute for tea, whence it is sometimes called LABRADOR TEA. Sir John Franklin and his party, in the arctic expedition of 1819-22, used in the same way the *Ledum palustre* (Marsh Ledum or Wild Rosemary), which produced a beverage with a smell resembling rhubarb, yet they found it refreshing. The leaves of both these shrubs possess narcotic properties, and render beer heady. They are regarded as useful in agues, dysentery, and diarrhea.

LEDYARD, *lēd'yērd*, JOHN: explorer: 1751-1789, Jan. 17; b. Groton, Conn.; nephew of William L. He studied law a short time; entered Dartmouth College to prepare for missionary work among the Indians 1772; spent several weeks among the Indians of the Six Nations, and gave up his missionary projects; shipped as a common sailor at New London; enlisted in a British regt. at Gibraltar but was soon discharged; accompanied Capt. John Cook on his third and last voyage around the world; deserted from the British navy off Long Island 1782; and spent several months trying to fit out an exploring expedition to the n.w. coast of N. America. After various failures to secure a ship for his purpose in the United States and France, he determined to make the journey overland and alone. He started from London 1786, walked around the whole coast of the Gulf of Bothnia from Stockholm to St. Petersburg, a distance of 1,400 m., in 7 weeks, in the depth of winter, and after traveling a long distance in s. Siberia, was suddenly arrested at Irkutsk 1788, Feb. 24, by order of the empress, and expelled from Russia without any explanation. On his return to London, he undertook an expedition fitted out by the Assoc. for Promoting the Discovery of the inland parts of Africa, and died soon after reaching Cairo, Egypt. He was of restless disposition, and some features of his career seem unaccountable.

LEDYARD, WILLIAM: 1738-1781, Sep. 7; b. Groton, Conn.: soldier. As col. of Conn. militia he was given command of Forts Trumbull and Griswold, erected for the protection of New London, during Benedict Arnold's raid along the Conn. coast 1781. On Sep. 7 his hastily collected, poorly armed, and undisciplined force of 157 men in Fort Griswold was attacked by a British force of 800 men, and resisted assaults, for nearly an hour, till the fort was taken by storm. After fighting had ceased, he was killed with his own sword as he placed it in the hand of the British commander, and nearly 100 of his garrison were massacred.

LEE.

LEE, n. *lē* [AS. *hleō*, shade, shelter: Icel. *hlé*, lee; *hlifa*, to protect, to shelter: Dut. *luw*, shelter from the wind]: a calm or sheltered place; a place defended from the wind. **UNDER THE LEE**, on the side which is sheltered from the wind; protected from the wind. **LEE SHORE**, the shore not exposed to the wind—said by persons on the land: but—to sailors on board a ship—the shore or land to the leeward of a ship, that is, the land next the lee side, and toward which land the wind blows. **LEEWARD**, a. and ad. *lēwērd* or *lō'ērd*, in the direction of the part toward which the wind blows, that is, the part next the lee side; opposite to *windward* which is the direction whence the wind comes—said of the position of a ship. **LEEWAY**, n. *lēwā*, the side movement of a ship to the leeward of her course (see **LEEWAY**, below). **THE LEE SIDE OF A SHIP**, the side or part not exposed to the wind, as distinguished from the *weather side*, which is the side or part against which the wind blows. *Note.*—It is plain from the definitions, that a *lee shore* means one condition of things on board a ship, and quite the opposite on shore. To a seaman in a storm, a lee shore is always fraught with danger.

LEE, n: see **LEES**.

LEE: town of Berkshire co., Mass.; on the Housatonic river and railroad; 38 m. e. of Albany, 99 m. n. of Bridgeport, 110 m. w. of Boston, 115 m. n. by e. of New York. It is noted for extensive quarries of beautiful marble, from which much of the material for the extension of the national capitol and the Rom. Cath. cathedral in New York was taken. It contains 6 churches, high and graded schools, public library, 1 national bank (cap. \$200,000), 1 savings bank, 25 paper-mills, several woolen factories, 3 machine shops, 2 iron foundries, trotting park, and daily and weekly newspapers. L. was settled 1760, incorporated 1777, and named in honor of Gen. Charles Lee. Pop. (1880) 3,939; (1885) 4,274.

LEE, Mother **ANN**: see **SHAKERS**.

LEE, **ARTHUR**: 1740, Dec. 20—1792, Dec. 12; b. Va.; youngest bro. of Richard Henry L. (1732-94). He was educated at Eton, studied medicine at Edinburgh, and after travelling on the continent, returned to America, and started as a physician. He was soon drawn into the field of politics; he returned to England, advocated the rights of the colonies in the English newspapers, and 1776, took up his residence at Paris, as secret agent of the American congress. In this capacity, he was busily employed during the whole struggle, greatly to the advantage of the colonists. Lee, like his brother, was an admirable scholar and writer, and had the friendship of some of the eminent men of his time, Burke, Wyndham, Sir William Jones, the Abbé Raynal, and the Duke de Rochefoucauld. See *Life and Correspondence*, by R. H. Lee (2 vols. Boston 1829).

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LEE, CHARLES: 1731-1782, Oct. 2; b. Dernhall, Cheshire, England: soldier. He was commissioned lieutenant in the British army 1751, accompanied his regiment to America 1754, took part in Braddock's expedition 1755, in the Old French war, was wounded in the assault on Ticonderoga 1758, took part in the capture of Fort Niagara, and returned to England and was promoted major 1761. Ambitious for a high command that he was unable to attain in England, he distinguished himself with Burgoyne in the Portuguese campaign 1762, and entered the service of the king of Poland 1764. In 1769 he served in the Polish campaign against the Turks as major-general, but his quarrelsome temper and vindictive letters and remarks about his superiors made trouble and led to several duels. In 1773, Nov., he came to America as a soldier of fortune, purchased an estate in Berkeley, Va., became acquainted with the chief leaders in the patriot cause, and sought to impress on all the greatness of his military genius. In 1776, June, congress appointed him second major-general in the continental army, though he had aspired to the chief command. He took part in the defense of Charleston; was captured by the British at Baskingridge, N. J., 1776; exchanged 1778; served in the battle of Monmouth and by his insubordination nearly lost the day to the Americans; was placed under arrest by Washington; tried and suspended from command for a year for disobedience of orders, misbehavior before the enemy, and disrespect to the commander-in-chief; and after writing an impudent letter to congress was by it dismissed from the army. That he plotted while a prisoner of war to betray the American cause, and that his strange conduct at Monmouth was in keeping with an agreement then made, seems proved by papers in his own handwriting that had been delivered to the brothers Howe and kept secreted in the family archives till 1857. L. died in Philadelphia.

LEE, FRANCIS LIGHTFOOT: signer of the Declaration of Independence: 1734, Oct. 14-1797, Apr. 3; b. Stratford, Va.; son of Thomas L. He was educated by private tutors; inherited a large estate; was a member of the Va. house of burgesses 1765-72; delegate in congress 1775-79; signed the Declaration of Independence, and was a member of the committee that drew up the articles of confederation, insisting that peace with England should not be signed till she had guaranteed to the United States the rights to the free navigation of the Mississippi river, and to the Newfoundland fisheries. Afterward, excepting a short service in the Va. legislature, he led the life of a country gentleman.

LEE, FREDERIC RICHARD, R. A.: 1798, June-1879, June 4; b. Barnstaple, Devonshire, England: landscape painter. He was compelled by ill-health to quit the army, and 1818 became a Royal Acad. student. A constant exhibitor 1822-70, he was elected an A.R.A. 1834, an R.A. 1838. L. was one of the most thoroughly na-

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tional painters of his day. Among his best pictures are *The Broken Bridge*, *The Mill*, *The Watering-place*, *The Fisherman's Haunt*, *The Silver Pool*, *The Plowed Field*, *A Devonshire Village*, *A Village Green*, *Cover Side*, *Harvest Field*, *A Devonshire Lane*, *Penshurst Avenue*, *Avenue in Shobbrook Park*. In 1848, he began to paint a series of works with S. Cooper, the cattle-painter—the former executing the landscape, and the latter the animals. L. died in Cape Colony.

LEE, HENRY ('Light-Horse Harry'): 1756, Jan. 20—1816, Mar. 25; b. Va.; son of a cousin of Arthur L. He was one of the most daring, vigilant, and successful cavalry officers on the side of the colonists. 'Lee's Legion' was probably not surpassed in effectiveness and courage by any body of troops raised in America. In the famous retreat of Greene before Lord Cornwallis, it formed the rear-guard, the post of honor, and covered itself with glory. At the battles of Guildford Court House and Eutaw, Lee particularly signalized himself. After the war, he was sent to congress as a delegate from Virginia, advocated the adoption of a federal constitution, and 1792 was chosen gov. of Virginia. In 1809, he published *Memoirs of the War in the Southern Department of the United States*. He died at Cumberland Island, Georgia.

LEE, JESSE: 1758, Mar. 12—1816, Sep. 12; b. Prince George's co., Va.; fervent and devoted Meth. missionary. He joined the Meth. Church 1773; entered the ministry and preached his first sermon 1779; was received into the N. C. conference 1783; was on missionary service in N. C., Va., Md., and N. J. till 1787; formed the first Meth. class in New England at Stratford, Conn., 1787, Sep. 26, and one in Boston 1792, July 13; travelled and preached through New England six years; and became asst. to Bp. Asbury 1796; and was chaplain to the U. S. house of representatives 1807, 12, 13, and to the U. S. senate 1814, retaining the latter office till his death. He published *A History of Methodism* (1807).

LEE, JOHN D.: see MOUNTAIN MEADOW MASSACRE.

LEE, LUTHER, D.D.: Meth. Episc. clergyman; b. Schoharie, N. Y., 1800, Nov. 30. He joined the Meth. Episc. Church 1821; became a travelling preacher 1827; began lecturing and preaching against slavery 1836, and was several times mobbed; established and edited the *New England Christian Advocate* at Lowell, 1841; withdrew from the Meth. Episc. Church 1842; joined the Wesleyan Methodists, established *The True Wesleyan*, and became pastor of a church in Syracuse, N. Y. 1843; and was pres. of the first Wesleyan Meth. general conference 1844. In 1856 he became pres. and prof. of theology in Michigan Union College; 1857 resumed preaching; 1864-67 was prof. in Adrian College; and 1867 returned to the Meth. Episc. Church. He has published *Universalism Examined and Refuted* (New York 1836); *The Immortality of the Soul*

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(1846); *Revival Manual* (1850); *Church Polity* (1850); *Slavery Examined in the Light of the Bible* (1855); and *Elements of Theology* (1856).

LEE, RICHARD HENRY: 1732, Jan. 20—1794, June 19; b. Stratford, Va.; great-grandson of the RICHARD L. who emigrated with a numerous household to America, in the reign of Charles I., and settled in the country between the Rappahannock and Potomac rivers. This English ancestor was a bold royalist, and during the Protectorate of Cromwell, was mainly instrumental in inducing the colony of Virginia to assume a semi-independent attitude. Richard Henry was educated first at home, afterward in England. When the British parliament had passed (1764) the act declaring its right to tax the colonies, and also the Stamp Act (1765), he immediately became the centre of an active opposition among the colonists, associated himself with Patrick Henry (q.v.), and was sent as a delegate from Virginia to the first American congress, at Philadelphia, 1774, Sep. 5, in which he at once became a leader. He wrote many of those vigorous and sagacious addresses to the king, the people of England, and the colonies, which set forth appropriately the dignity of the great struggle. Lee was placed on the committees charged with preparing the munitions of war, and with devising all other means of offering a vigorous resistance to the British govt. His labors at this time were enormous. 1776, June 7, Lee made the most celebrated of all his speeches, when introducing before the congress a measure declaring the 'united colonies' to be 'free and independent states,' and 'absolved from all allegiance to the British crown.' Notwithstanding ill-health he was active throughout the war, chiefly, however, as a civilian. In 1784, he was elected pres. of congress, and when the federal constitution was established, he entered the senate for Virginia. Toward the close of his career, he became a decided federalist, though originally he had viewed that system of government with great suspicion, as tending towards a despotic centralization of power. In 1792, he retired from public affairs, and died in his native state. His *Life and Correspondence* was published by his great-grandson, R. H. Lee (2 vols. Phil. 1825).

LEE, ROBERT EDWARD: commander-in-chief of the Confederate army in the war of secession: 1807, Jan. 19—1870, Oct. 12; b. Stratford, Westmoreland co., Va.: son of Gen. Henry L. ('Light-Horse Harry'), of the Revolutionary army. He graduated at the U. S. Milit. Acad., West Point, 2d in a class of 46 (1829), and entered the U. S. army as 2d lieut. of engineers. From that time till the beginning of the Mexican war he was employed in establishing the boundary line between O. and Mich., superintending the improvements in the harbor of St. Louis and of the Missouri and upper Mississippi rivers, and supervising those in the navigation of the Ohio and the lower Mississippi rivers. He attained the rank of capt.

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1838, July 9. At the beginning of the Mexican war he was assigned to the staff of Gen. John E. Wool (q.v.) as chief engineer; but when Gen. Winfield Scott (q.v.) took command and began planning his operations against Mexico City, he called Capt. L. to his own staff. He rendered conspicuous professional and military services through the war; was brevetted maj., lieut.col., and col., for his work before and in the battles of Vera Cruz, Cerro Gordo, Contreras, Churubusco, Chapultepec, and Mexico City; and was frequently commended by Gen. Scott for his engineering skill. After the war he served some time as asst. to the chief engineer of the army. In 1852, Sep. he was appointed supt. of the U. S. Milit. Acad., and held the office till 1855, Mar., when he resigned to become lieut.col. of the newly formed 2d U. S. cavalry. This regt. was stationed on the Tex. frontier, and he remained with it till his withdrawal from the Union army, excepting the period 1859, Oct. 17-25 when he was in command of the federal forces detailed to suppress the John Brown insurrection. He was in command of the dept. of Tex. the greater part of 1860; was promoted col. of his regt. 1861, Mar. 16; and resigned his commission Apr. 20, after the secession of Va. He wrote his old friend and commander Gen. Scott that the separation from the service had cost him a great struggle, and that he never desired again to draw his sword save in defense of his state. To his sister he declared he recognized no necessity for the existing state of affairs, but had not been able to make up his mind to raise his hand against his relatives, his children, his home. On the acceptance of his resignation, he went to Richmond, and Apr. 23 was appointed by the gov. of Va. commander-in-chief of the military and naval forces of the state with the rank of maj.gen. In May, when the Confederate capital was established in Richmond, he was commissioned third in rank of five full generals authorized by the Confederate congress. He remained some time in Richmond superintending military preparations, had a brief service in the field in W. Va., and late in autumn was sent to S. C. where he planned and partially constructed effective coast lines of defense. In 1862, March, he was recalled to the capital and assigned to the conduct of milit. operations in the armies of the Confederacy, under the direction of Pres. Davis; and June 1 was appointed commander of the army assembled for defense of Richmond, succeeding Gen. Joseph E. Johnston (q.v.) wounded at Fair Oaks the previous day. This was his first opportunity for commanding a great army and exhibiting his milit. genius; and from that day till his surrender he was the most conspicuous personage in the Confederacy. He at once recalled all the scattered troops to the vicinity of Richmond, to check the advance of the Union army under Gen. McClellan on the capital, had an army of 80,000 men at his disposal by June 25, and on the following day began an offensive movement

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against McClellan, which resulted in the battles of Mechanicsville, Gaines's Mills, Savage Station, Frazier's Farm, and Malvern Hill, and the defeat of McClellan's plans. Aug. 29-30 L. defeated Pope at Manassas (second Bull Run); Sep. 5 invaded Md.; Sep. 17 fought the indecisive battle of Sharpsburg (Antietam) with McClellan; and being checked in his progress by McClellan, recrossed the Potomac Sep. 18-19. He successfully repulsed the Union army under Burnside, who had succeeded McClellan, at Fredericksburg (see FREDERICKSBURG, BATTLE OF) Dec. 13; fought a great battle with Hooker at Chancellorsville (see CHANCELLORSVILLE, BATTLE OF) 1863, May 2-3; again crossed the Potomac to invade Penn., June 24; while marching toward Harrisburg was confronted at Gettysburg by the Union army under Gen. Meade and was defeated in a 3-days' struggle (see GETTYSBURG, BATTLE OF) July 1, 2, 3; and again retired to Va. Early in 1864, May, Gen. Grant, who had succeeded to the command of the Union armies, crossed the Rapidan and began another campaign against Richmond. The great opposing armies met in battle at the Wilderness May 5, 6; Spottsylvania Court House May 9-12; North Anna River May 23; and Cold Harbor June 3. Grant operated by flank movements; L. acted mostly on the defensive in fortified positions. June 14, 15, Grant crossed the James river s. of the Appomattox, laid siege to Petersburg, and maintained it for 300 days. Early in 1865 L. would have evacuated Richmond and retreated from Petersburg—the key to the capital—and risked a general engagement in the field; but the Confederate civil authorities, who had impeded his work from the beginning, insisted on his retaining the capital at all hazards. He had not only the two cities but all their communications to defend. Beyond his lines Grant was stretching his larger army further s. and in a surrounding grasp. Late in March Grant moved his army to cut the Danville and Southside railroads, L's chief artery of supplies. Sheridan defeated the right wing of the Confederate army at Five Forks Apr. 1; Grant made a general and successful attack on the works at Petersburg Apr. 2; and the same night L. evacuated Petersburg and Richmond, and retreated toward Danville. Sheridan hastened after him; fought him near the Appomattox river and took 6,000 prisoners Apr. 6. Apr. 9, L., seeing the hopelessness of continuing the struggle, surrendered the remainder of his army to Grant at Appomattox Court House under terms of great magnanimity on the part of Gen. Grant. This virtually ended the civil war, though Johnston did not surrender the army at the southward till Apr. 26. After the surrender L. retired to private life, but was soon afterward elected pres. of Washington College, Lexington, Va., where he remained till his death.

Gen. Lee, admired and extolled throughout the Southern states, may be said to have been esteemed scarcely less by his foes in war—as far, at least, as regards their

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appreciation of his rare military genius, his many private virtues, and his unblemished record for bravery, modesty, and unselfishness. He was keen in foresight, masterly in strategy, swift in execution, unflinching in his spirit. In the still air of his college, in which he passed his few remaining years after the tremendous struggle, he served quietly, without bitterness, with an elevating influence on the students that were drawn by the charm of his name.

LEE, SAMUEL, D.D.: 1783, May 14—1852, Dec. 16; b. Longnor, Shropshire, England: orientalist and linguist. He studied at Queen's College, Cambridge, and took his degree B.A. 1817. Two years later he was chosen Arabic prof. in the same univ., received the degree D.D. from Halle (unsolicited) 1822, and from Cambridge 1833, was appointed regius prof. of Hebrew 1831, and died rector of Barley, Hertfordshire. His *Grammar of the Hebrew Language* (2d ed. Lond. 1831), *Book of Job, translated from the Original Hebrew* 3 vols. (Lond. 1837), *Hebrew, Chaldaic, and English Lexicon* (Lond. 1840), and his translation from the Arabic of the Travels of Ibn-Batuta (Lond. 1833), have secured for him high reputation. He published also *Sermons on the Study of the Holy Scriptures* (1830), and *Events and Times of the Visions of Daniel and St. John* (Lond. 1851). He took charge, for the British and Foreign Bible Society, of editions of the Syriac Old Testament, and of the Syriac New Testament or Peshito, of the Malay, Persian, and Hindustani Bibles, and of the Psalms in Coptic and Arabic.

LEE, SAMUEL PHILIPS: naval officer: b. Fairfax co., Va., 1812, Feb. 13: grandson of Richard Henry L. He entered the U. S. navy as midshipman 1825, Nov. 22; was promoted passed midshipman 1833, lieut. 1837, commander 1855, capt. 1862, commodore 1866, and rear-admiral 1870; and was retired 1873, Feb. 13. He commanded the *Oneida* in the attack on Forts Jackson and St. Philip and in the lower Mississippi movements 1862, the N. Atlantic blockading squadron 1862-64, and the Mississippi squadron 1864-5; was pres. of the board to examine vol. officers for admission to the regular navy 1866-7: chief signal officer of the navy 1868-70; and commander of the N. Atlantic fleet 1870-73.

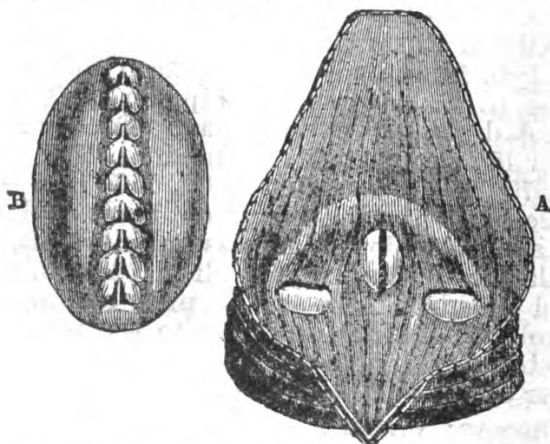
LEE, THOMAS: Virginian of historic note: b. early in the 18th c.; d. 1750; third son of Richard L., and grandson of the Richard L. who came from England and founded the family in America. Thomas L. inherited the estate at Stratford, Westmoreland co., Va., and was commissioned as gov. just before his death. His six sons rendered eminent service in the Revolution.—WILLIAM, his fifth son (d. 1795) was sent to England as agent of Va., and was afterward diplomatic agent at the Hague, Vienna, and Berlin

LEECH.

LEECH, n. *lēch* [AS. *læce*, a physician: Icel. *lækknir*; Goth. *leikeis*, a physician, a leech—from Goth. *leikinon*; Icel. *lækna*, to heal: Bohem. *lek*, medicine: comp. Gael. *lighich*, to let blood; *leigheis*, to heal, to cure]: formerly the name of a physician; an aquatic worm of several species, one of which is employed to suck blood from diseased parts (see **LEECH** below: also **LEECHING**): V. to draw blood by leeches. **LEECH'ING**, imp. **LEECHED**, pp. *lēcht*. *Note*.—**LEECH**, the aquatic worm, is so called because it is supposed to act as a healer—the name of a *leech* as applied to a physician is not taken from the blood-sucking worm, but the reverse.

LEECH, n. *lēch* [Icel. *lik*, a leech-line: O.Dut. *lyken*, a bolt-rope]: one of the side borders or edges of a sail. **LEECH-LINES**, the small ropes from the middle of the leeches of a sail.

LEECH (*Hirudo*): Linnæan genus of *Annelida*, of ord. *Suctoria*, now forming the family *Hirudinidæ*, and divided into a number of genera, some of which contain many species. They are inhabitants mostly of fresh waters, though some live among grass, etc., in moist places, and some are marine. They are most common in warm climates. The body is soft, and composed of rings like that of the earthworm, but not furnished with bristles to aid in progression, as in the earthworm; instead of which, a sucking disk at each extremity enables the L. to avail itself of its power of elongating and shortening its body, in order to moderately rapid loco-



A, mouth of the Medicinal Leech (magnified), showing the position of the teeth; B, one of the teeth on a larger scale, showing the serrated edge.

motion. The mouth is in the anterior sucking disk. The mouth of many of the species, as of the common medicinal L., is admirably adapted not only for killing and eating the minute aquatic animals which constitute their ordinary food, but for making little wounds in the higher animals, when opportunity occurs, through which blood may be sucked. The mouth of the medicinal L. has three small white hard teeth, minutely ser-

LEECH.

rated along the edges, and curved so as to form little semicircular saws, provided with muscles powerful enough to work them with great effect, and to produce a triradiate wound. The stomach is very large, and is divided into compartments, some of which have large lateral cæca; and a L. which has once gorged itself with blood retains a store for a very long time, little changed, in these receptacles, while the digestive process slowly goes on. The circulating system consists of four great pulsating trunks, one dorsal, one ventral, and two lateral, with their branches; there is no heart. The aëration of the blood takes place by numerous small apertures on the ventral surface, leading into respiratory sacs. Leeches are oviparous, and each individual is hermaphrodite.

They have small eyes—in the medicinal L. ten—appearing as black spots near the mouth, and of most simple structure. Their epidermis scales off readily; and one cause of the great mortality so frequent among leeches kept for medicinal use, is the want of aquatic plants in the vessels containing them, among which to rub themselves for aid in this process, and for riddance of the slime which their skins exude. Leech *aquaria* in which aquatic plants grow, are therefore much more favorable for the health of leeches than the tanks and vessels formerly in use.—The MEDICINAL L. (*H. medicinalis* or *Sanguisuga officinalis*) is largely brought from Hamburg and from s. Europe. Leech-gatherers sometimes adopt the simple mode of wading into the water, and seizing the leeches which attach themselves to their bare legs. Pieces of liver, etc., are sometimes used for baits, and a kind of net is sometimes used. Some supplies come from more eastern regions. Slight differences have led to the establishment of two species—one more northern, and one more southern—among the many millions commonly imported every year into Britain. The more northern—which is that above named—has the belly spotted with black; the more southern (*H. provincialis*, or *Sanguisuga medicinalis* or *meridionalis*) has the belly unspotted. Other species are used for



Digestive Apparatus of the Medicinal Leech. *h*, the stomach; *k*, lateral cæca; *e*, intestine.

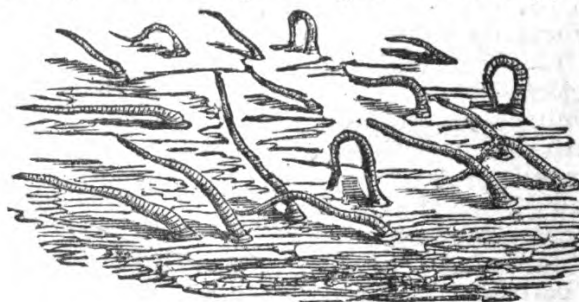
LEECH.

originated in the middle ages.—See LEECHING.—The HORSE-LEECH (*Hæmopsis sanguisorba*) is much larger than the medicinal species, but its teeth are comparatively blunt, and it is little of a blood-sucker—notwithstanding the popular notion—and useless for medicinal purposes. It feeds greedily on earthworms, which issue from the banks of the ponds or sluggish streams which it inhabits.—In many parts of India, as in the warm valleys of the Himalaya, the moist grass swarms with leeches, some of them very small, but very troublesome to cattle and to men who have occasion to walk through the grass. Sir James E. Tennent describes the land-leech of Ceylon (*Hæmadipsa Ceylanica*) as about an inch in length, and as fine as a common knitting-needle, but



Horse Leech.

capable of distension to the thickness of a quill and a length of nearly two inches. It can insinuate itself through the meshes of the finest stocking. It is always ready to assail a passing traveller or quadruped. The coffee-planters are obliged to wear *leech-gaiters* of closely-woven cloth for protection. Horses are driven wild by these pests, 'and stamp the ground in fury, to shake



Land Leeches:
From Tennent's *Ceylon*.

them from their fetlocks, to which they hang in bloody tassels.' The bare legs of palanquin-bearers are adorned with clusters of them like bunches of grapes. Their numbers have often occasioned the death of men compelled to spend days where they abounded. The moist valleys of Java, Sumatra, Chili, and other tropical countries, swarm with land-leeches as much as those of India and Ceylon.

LEECH, JOHN: English artist of most genial humor: 1817, Aug. 29—1864, Oct. 28; b. London; son of the landlord of the London Coffee House. He received his education at the Charter-house with Thackeray, his lifelong friend. His reputation is associated almost entirely with *Punch*, to which, beginning about 1840, he contributed

LEECHING.

thousands of humorous sketches. These sketches are frequently as full of grace as of humor; the drawing is often excellent; and his female faces have a quiet, healthful beauty, attractive in the ball-room, but more attractive by the fireside and with children on the knee. In the *Punch* sketches, he satirized keenly, yet on the whole humanely, the vagaries of male and female attire, the precocity of the young, the pomp of Paterfamilias, the pride of domestic servants, and the singular relations which sometimes subsist between the parlor and the kitchen. To the future historian of the Victorian era, these admirable sketches will be invaluable.

A collection of L.'s best contributions to *Punch* has been published separately, in several series, as *Pictures of Life and Character*; also a vol. of *Pencillings from Punch*. See the essay on L. by Dr. John Brown (1882).

LEECHING, or the application of leeches (see LEECH), for abstracting blood, is preferable to venesection or cupping in many forms of disease; as, for example—1. In local determinations of blood, unattended with febrile symptoms, as in acute inflammation of the female breast, when the pressure of the cupping-glass would cause intense pain. 2. In abdominal inflammations, especially in Peritonitis (q.v.), L. is often preferable to general blood-letting, particularly in patients of weak constitution. 3. In various organic affections of the heart and lungs, L. often affords great relief. Indeed, there are few diseases in which loss of blood is required, excepting erysipelas, in which the application of leeches is objectionable; though it is inexpedient, as compared with venesection, in those cases in which it is desirable to make an immediate impression on the disease (as in peritonitis in robust persons), or where the disease is very rapid and fatal (as in croup).

In the diseases of infants and young children, leeches must be applied with caution. Infants are sometimes completely blanched by the application of one or two leeches, and a case is recorded by Pelletan in which six leeches applied to the chest proved fatal to a child aged six years. In applying leeches, the part should be thoroughly cleaned, and the leeches, after being dried by rubbing them in a clean linen cloth, should be placed in an open pill-box, or in a wine-glass, and applied to the spot at which it is desired that they should attach themselves. When it is wished to affix a leech to the inside of the mouth, it is placed in a narrow tube called a leech-glass. When the animals will not attach themselves readily, they may sometimes be induced to bite by moistening the part with milk or blood. 'Artificial leeches' are sometimes used.

The quantity of blood which a leech is capable of drawing may be estimated at an average at about a drachm and a half, though occasionally a leech will abstract between three and four drachms; and this quantity does not include that lost after the animal has fallen off,

LEECH LAKE—LEEDS.

which is often considerable, especially in children. To cause the leech to disgorge the blood, salt is usually applied to its body.

When the leeches have fallen off, it is usually desirable to promote to some extent the flow of blood from their bites, and this is readily done by the application of warm fomentations or poultices. The bleeding generally stops spontaneously after a short time; if it goes on longer than is desirable, mere exposure to the air, or the application of the fluff of a hat, or of a bit of cobweb, will usually check it, the fibrine of the blood coagulating on the applied filaments, and forming a small clot. If these means fail, a little cone of lint should be inserted into the bite, over which a compress should be laid, and a bandage applied; or the bite should be touched with a stick of nitrate of silver (lunar caustic) scraped to a point.

Leeches, when applied to the mouth or interior of the nose, have been occasionally swallowed, and have given rise to very unpleasant symptoms. The best treatment in a case of this kind is to prescribe wine—half a glass, or even a glass, every quarter of an hour—which will speedily destroy the leech. A moderately strong solution of common salt would probably exert a similar fatal action on the animal.

LEECH LAKE: in n. Mipn., 1,330 ft. above sea-level; length nearly 20 m., breadth 15 m. Its discharge is through a short stream into the Mississippi.

LEEDS: first town in Yorkshire, and fifth in England in population: parliamentary and municipal burough. It is in the n.w. of the W. Riding of Yorkshire, in the valley of the Aire, and is the seat of important manufactures, especially of clothing. The woolen trade here exceeds in extent that of any other part of England. It has been estimated that general goods to the annual value of £11,000,000 pass through the warehouses in L. The staple manufactures are superfine broad and coarse narrow cloths, pelisse cloth, shawls, blankets, and Scotch camlets. At Holbeck, suburb of L., there is a flax mill, the largest of the kind in Europe, which employs more than 2,500 hands. About 2,500 hands are employed in the worsted and silk trades. The manufacture of leather is carried on in some of the largest tanneries in the kingdom, and about 50 firms are engaged in making boots and shoes. The iron industries have been largely developed, and employ about 15,000 persons. The other chief manufactures are of glass, paper, tobacco, oil, chemicals, and earthenware. There are 34 churches in L., 8 Rom. Cath., and about 80 dissenting places of worship. The chief church is St. Peter's, in Kirkgate, rebuilt 1838 at a cost of £29,770. It is 180 ft. long by 86 ft. wide; the tower is 139 ft. high, and contains a peal of 13 bells. It is a very noble edifice. The principal windows are of beautiful stained glass, and it contains some fine statues, one of which is in

LEEF—LEEK.

memory of those natives of L. who fell in the Crimea; the church has a good choir. The most interesting church in the town is St. John's, New Briggate, consecrated by Abp. Neale, 1634, an almost unique example of a 'Laudian' church, and still retaining the original fittings. The other principal buildings are chiefly of recent erection. The Town-hall, completed 1858, is 250 ft. long, 200 ft. broad, and the tower is 225 ft. high. It covers 5,600 sq. yards. The great hall is 161 ft. long, 72 ft. wide, and 75 ft. high. It is richly decorated, and contains one of the largest and most powerful organs in Europe, also statues of Edward Baines and Robert Hall, formerly members for the borough. There is also a colossal statue of the queen in the vestibule, and of Wellington in the front of the building. Kirkstall Abbey, about 3 m. from L., was founded between 1147 and 53 by Henry de Lacie for the Cisterican order of monks. It is a fine old ruin, remarkable for its simple grandeur and unity of design. Adel church, about 4 m. from L., is an interesting building, erected 1140. Near it was a Roman station, where several antiquities have been found. The General Infirmary was erected 1868 from designs by Sir G. G. Scott, at a cost of £100,000, and contains accommodations for 300 in-patients. The Mechanics' Institute, erected 1867, at a cost of £25,000, contains a lecture-hall, accommodating 1700 persons. The Free Library, established 1870 (under the Free Libraries Act), contains 30,000 vols. The borough jail is a large castellated building at Armley. Other notable buildings are the Corn Exchange; the Post-office, formerly the Court House, near which is a statue of Sir Robert Peel; the Queen's Hotel; the Philosophical Hall, having a fine museum; the Wesleyan Training College, erected 1868; Turkish Baths, and Beckett's Bank, a fine work by Sir G. G. Scott; etc. There is also a library of 30,000 vols., founded by Priestley 1768. There are numerous admirably organized charitable institutions. L. has also a royal exchange, opened 1876, a stock exchange, two general markets—one of which is a handsome structure of iron and glass—a cattle market, five railway stations, eleven banks, two theatres, four daily and five weekly newspapers. Roundhay Park, 2 m. from L., is a public recreation ground. Yorkshire College, opened at L. 1874, an important centre of higher education in science and languages, has 10 professors and instructors.—Pop. (1871), 259,212; (1881) 309,112.

LEEF, a. *lēf*: OE. for LIEF, which see.

LEEK: manufacturing and market-town of England, county of Stafford, 24 m. n.n.e. of the town of Stafford. The parish church dates from 1180, and the town contains numerous educational and benevolent institutions. The people are employed chiefly in the manufacture of silk goods. Pop. (1881) 12,865.

LEEK—LEES.

LEEK, n. *lĕk* [AS. *leác*; Bohem. *luk*; Ger. *lauch*; Icel. *laukr*, a leek], (*Allium Porrum*, ord. *Liliaceæ*: see **ALLIUM**): biennial plant, native of s. Europe; with no proper bulb at the root, but generally a slight increase of the thickness of the stem; a stem about 3 ft. high, leafy at bottom; the leaves about an inch wide; the flowers in a large and very dense terminal globular umbel, which is not bulbiferous. It has been long in cultivation, and some of the varieties exhibit the effects of cultivation in greatly increased size and delicacy. The lower part of the stem, before it has run up into a flower-stalk, blanched by earthing up or other means which also induce it to swell and extend, is much esteemed for culinary purposes. Its flavor is much milder than that of the onion, or any other species of *Allium*. The L. has long been an especial favorite of the Welsh, and is adopted as the national emblem of Wales. It is generally sown in spring, and is used during the following winter. It delights in a rich but light and dry soil. Gardeners often transplant seedling leeks, instead of merely thinning out the original rows; and sometimes make deep holes for them with the dibble, into which they merely throw a little earth to cover the roots, leaving the stem to swell in the open hole. **LEEK-GREEN**, in *min.*, the green color which is peculiar to the leek. To **EAT THE LEEK**, in *familiar language*, to withdraw under compulsion injurious statements or assertions, and to apologize.

LEELITE, n. *lĕlīt* [after Dr. *Lee* of Cambridge]: a variety of compact felspar of a reddish color, waxy texture, and horn-like translucency.

LEER, n. *lēr* [AS. *hleór*; Icel. *hlyr*, the cheek, the face: Dut. *loeren*, to look askance, to wink; Sw. *lur*, a wink; Ger. *lauern*, to spy]: a peculiar sidelong glance or look, usually considered not reputable; a libidinous side-look; in *OE.*, the complexion; look; a winning look: V. to look with a leer. **LEER'ING**, imp. **LEERED**, pp. *lĕrd*. **LEER'INGLY**, ad. *lī*: connected with **LOWER** or **LOUR**, which see.

LEER: see **LEAR**.

LEER, *lār*: town of Hanover, 32 m. w.n.w. from Oldenburg. There are manufactures of linen, hosiery, etc.; breweries and distilleries; and ship-building yards. Pop. (1880) 10,074.

LEES, n. plu. *lĕz* [F. *lie*, lees—from mid. L. *lĕā*]: the dregs or sediment from a liquor; refuse; the sing. **LEE**, is not now in use.

LEES, *lĕz*, **FREDERICK RICHARD**: author: b. near Leeds, England, 1815, Mar. 15. In 1834 he became an earnest advocate of total abstinence; 1841–44 received several prizes for essays on the subject; 1845 started the *Truth-Seeker in Literature, Philosophy, and Religion*, which he edited several years; 1853 represented the temperance assoc. of the n. of England in the world's tem-

LEET—LEEUWENHOEK.

perance convention in New York; 1856 received a prize of \$500 from the United Kingdom Temperance Alliance for an argument favoring legislative prohibition of the liquor traffic; and 1860 was presented with a testimonial of 1,000 guineas by British friends of the temperance cause. He has published *The Metaphysics of Owenism Dissected* (1838-9), *History of Alcohol* (1843), and *Treatise on Logic, or the Method, Means, and Matter of Argument*.

LEET, n. *lēt* [Dut. *laet*, the subject of a certain jurisdiction]: an anc. Anglo-Saxon law-court: in English law, courts held in a manor, township, or hundred, for local purposes.

LEET, n. *lēt* [AS. *hlet*, a lot]: in Scot., a selected list of candidates for any office.

LEETE, *lēt*, WILLIAM: emigrant from England to Conn. 1637: b. not long after 1600; d. 1683. He was among the early settlers of New Haven, and one of the founders of Guilford; gov. of the colony 1661-65, held other offices 1665-76; gov. from 1676 till his death. The regicides Goff, Whalley, and Dixwell were received and sheltered by him.

LEEUWARDEN, or LEUWARDEN, *lō'wâr-dên* or *lā'û-vâr-dên*: town of the Netherlands, cap. of the province of Friesland, in a rich and extensive plain, on the Harlingen and Gröningen canal, 16 m. e.n.e. of Harlingen. It contains a handsome town-hall, an ancient palace of the princes of Orange, and many churches. Numerous canals intersect the town. L. has a society for the investigation of Frisian history, antiquities, and language, and another for the study of nat. history. Linen fabrics and paper are manufactured, and a trade in horses is carried on. Pop. (1880) 29,151.

LEEUWENHOEK (or LEUWENHOEK) *lō'wên-hôk*, ANTHONY VAN: one of the earliest microscopic observers: 1632-1723; b. Delft, Holland. The *compound microscope*, as it existed in his time, was very imperfect, and subject to many errors, which induced L. to employ only *simple microscopes*, that is to say, very small lenses of short focal lengths, fixed between two plates of metal pierced with a very narrow opening. He bequeathed to the Royal Soc. of London (where they are carefully preserved) a collection of these microscopes. It was in the *Philosophical Transactions* of this soc., to which he contributed 112 papers, that most of his observations were originally published.

Among the most important of his investigations may be mentioned a Memoir to the Royal Soc. 1690, in which he discovered, and clearly demonstrated, the continuity of the arteries and veins through intervening capillaries, and thus afforded ocular demonstration of the truth of Harvey's views regarding the circulation; he also examined the structure of the crystalline lens and of the brain. He is perhaps most generally known as the dis-

LEEWARD—LEFKOSIA.

coverer of the *Rotifers*, and as being the first to recognize the property which these animals possess of alternately dying and being resuscitated, according as they are dried or provided with the water necessary for the maintenance of their vitality.

His writings were collected and published in Dutch at Leyden and Delft (7 4to vols. 1686–1732; Latin translation, *Opera Omnia, seu Arcana Naturæ*, Leyden 1792; English translation, 2 4to vols. 1798–1800).

LEEWARD: see LEE.

LEEWARD ISLANDS: see ANTILLES.

LEE'WAY [see LEE]: side movement of a ship to the leeward of her course. When a ship is steering in a direction AB (see the fig.), and a strong wind is blowing as indicated by the arrow, the ship's actual course is the resultant of two forces, one represented by her headway (or locomotive power), the other by the force urging her in the direction of the wind. This resultant must be



somewhat in the line CD; and with the same power of wind, the angle BED will be great or small as the headway is diminished or increased. This angle represents the leeway; and the amount of ground lost to leeward in a given distance sailed is shown by the side of the triangle subtending this angle. In all computations of the course pursued, allowance has to be made for leeway. Some vessels in tolerable weather make scarcely any perceptible leeway, while bad sailers fall off as much as seven points of the compass.

LEFEBVRE, *lêh-fävr'*, FRANÇOIS JOSEPH, Duke of Danzig and Marshal of France: 1755, Oct. 25—1820, Sep. 14; b. Ruffach, Alsace. He entered the army at the age of 18, and was a sergeant in the French Guards when the Revolution broke out. He rose in rank with wonderful rapidity. He took part with Bonaparte in the *coup d'état* of 1799. In 1804, he was made a marshal of the Empire. He also conducted the siege of Danzig, and after its capture was created Duke of Danzig. He distinguished himself in the early part of the Peninsular War, and suppressed the insurrection in the Tyrol. During the Russian campaign, he had the command of the imperial guard, and 1814, of the left wing of the army which resisted the advance of the allies in France. Submitting to the Bourbons after Napoleon's abdication, he was made a peer.

LEFÈVRE D'ETAPLES, or LEFÈVRE, JACOBUS (STAPULENSIS): see FABER, JACOBUS.

LEFKOSIA, *lêf-kô-zê'â*, called also NIKOSIA, or NICOSIA, *nê-kô-zê'â* (anc. *Leucosia*): capital of the island of Cyprus (q.v.); on the Pidas, in the centre of an agricul-

LEFORT—LEFT.

tural plain, about 35 m. inland from Famagosta Bay. It is completely surrounded by walls about 3 m. in circumference, and over 30 ft. high, and is entered by three gateways. It was fortified in the time of Constantine the Great, but the old works were destroyed by the Venetians, who constructed the present fortifications. L. was taken 1570 by the Turks, who massacred the greater portion of the inhabitants. It contains several buildings of interest; as the mosque of St. Sophia, the church of St. Nicholas, now a granary, and the governor's palace. There is also a Latin convent, and a Mohammedan college with a library of Oriental books. The kings of Cyprus of the Lusignan dynasty resided here. The streets are narrow, ill-kept, and badly paved. L., under Turkish rule, was separated from the province in which it stands, and regarded as a fortress governed by a military chief; in 1878, when Cyprus came to be administered by Britain, it passed under civil rule, and is now the headquarters of the civil commissioner for the province. The climate of the place is unsuited for Europeans. The manufacture of carpets, tanning, silk weaving, and saddlery are principal employments. Pop. (by census 1879, Jan.) 11,197; of whom 5,628 were Mohammedans; 5,251 of the Greek Church; Rom. Catholics, 121; Armenians, 166; English, 28; Jews, 3.

LEFORT, *lêh-for'*, FRANÇOIS: 1656-99; b. Geneva. After serving in the French and Dutch service, he went to Russia, where he obtained a captain's commission in the army. He fought with distinction against the Turks and Tartars, and was active in the intrigues which placed Peter the Great on the throne. The czar never forgot L., who became his chief favorite, and next to Peter, the most important personage in Russia. He was a man of great acuteness and ability. He remodelled the Russian army, and laid the foundation of its navy. In 1694, he was made admiral and generalissimo. When Peter the Great undertook his visit to foreign countries 1697, L. was the chief of the embassy, in the train of which the czar travelled *incognito*. See Golikof's *Vie de Lefort*, and the German monographs by Posselt (1866) and Blum (1867).

LEFT, n. *lêft* [Dut. *luft* or *lucht*; L. *lævus*, left: probably *light* hand, in opposition to the stronger heavier *right* hand]: opposed to right. LEFT-HANDED, able to use the left hand with greater strength and dexterity than the right; unlucky; clumsy. LEFT-HANDEDNESS, the state or quality of being left-handed. A LEFT-HANDED MARRIAGE, an irregular marriage; in *Germany*, among princes and the higher nobility, marriage with a woman of inferior station who has neither the status nor privileges of a lawful wife—also called a *morganatic marriage*. OVER THE LEFT, in *familiar language*, an expression indicating that what has been said is understood 'in a contrary sense.' *Note*.—In the British house of commons, the Opposition sit on the *left* of the

LEFT—LEG.

speaker, and the members of Government with their followers on the *right*. RIGHT and LEFT in foreign legislative assemblies, see under RIGHT: see also MOUNTAIN, THE: FRANCE (*Political Parties*).

LEFT, v.: see under LEAVE 2. LEFT OFF, that which is laid aside, as *left off* clothing.

LEFTWICH, *lɛft'wɪch*, JOEL: soldier of the Revolution: 1759–1846; b. Broford co., Va.; wounded at Guilford. In 1812 he fought at Fort Meigs under Gen. Harrison; afterward was maj.gen. of militia.

LEG, n. *lɛg* [Icel. *leggr*, a stalk or stem: Dan. *læg*; Sw. *lugg*, the calf of the leg: comp. Gael. *lorg*, a staff, a support]: a slender support; the limb of an animal which supports the body (see LEG, THE): that by which anything is supported, as the leg of a table; in *OE.*, a bow made with the leg drawn back. LEGS (HUMAN) in *her.*, frequently borne as charges, sometimes naked, sometimes



booted; and they may be couped, i.e., cut evenly off; or erased, cut with a jagged edge; and that, either at the thigh or below the knee. The knee when represented is always embowed. A remarkable device of three legs in armor, conjoined at the thighs, and flexed in triangle, forms the insignia of the ancient kingdom of Man (see fig.), with the appropriate motto, *Quocunque jeceris stabit*. LEGGED, a. *lɛgd*, having legs. LEGGINGS, n. plu. *lɛg'gɪŋz*, coverings for the legs reaching to the knees. LEGGY, a. *lɛg'gɪ*, having unusually long legs. LEGLESS, a. *-ləs*, without legs. LEGGETS, n. plu. *lɛg'gɛts*, or LEGLETS, n. plu. *lɛg'lɛts*, coverings for the legs of young children. TO STAND ON ONE'S OWN LEGS, to depend on one's own exertions. TO TAKE LEG-BAIL, to abscond or run away.

LEG, THE: all that part of the lower extremity which is between the knee and the ankle. It consists of two bones, the tibia and fibula (see SKELETON: FOOT), and of masses of muscles (together with nerves and vessels) held in their position by coverings of fascia, and enveloped in the general integument.

The shaft of the tibia is of a triangular prismoid form, and presents three surfaces and three borders. The internal surface is smooth, convex, and broader above than below; except at its upper third, it lies directly under the skin, and may be readily traced by the hand. The external and the posterior surfaces are covered by numerous muscles. The muscular mass forming the calf (formed by the *gastrocnemius*, *soleus*, and *plantaris* muscles) is peculiar to man, and is directly connected with his erect attitude and his ordinary mode of progression. The anterior border of the tibia, most prominent of the three, is popularly known as *the shin*, and may be traced down to the inner ankle.

LEGACY.

The fibula, or small bone of the leg, lies on the outer surface of the tibia, and articulates with its upper and lower extremities, and with the astragalus inferiorly. It affords attachments to many of the muscles of this region.

This region is nourished by the anterior and posterior tibial arteries into which the popliteal artery separates. Both these arteries occasionally require to be tied by the surgeon in cases of wounds or aneurism. The blood is returned toward the heart by two sets of veins—the deep, which accompany the arteries, and the superficial, known as the internal or long saphenous, and the external or short saphenous veins. These superficial veins are very liable to become permanently dilated or varicose, if there is any impediment to the free transmission of the blood, or even from the mere weight of the ascending column of blood, in persons whose occupation requires continuous standing. For the nature and treatment of this trouble, see VARICOSE VEINS.

The nerves of the leg, both sensory and motor, are derived from the great sciatic nerve and from its terminal branches, the internal popliteal and the external popliteal or peroneal nerve.

In cases of fracture or *broken leg*, the two bones are more frequently broken together than singly, and the most common situation is at the lower third. The tibia is more often broken by itself than the fibula, in consequence of its sustaining the whole weight of the body, while the fibula has nothing to support. See FOOT.

LEGACY, n. *lĕg'ă-sĭ* [OF. *legat*, a legacy—from mid. L. *legātum*, a legacy: It. *legato*; Sp. *legado*, a legacy—from L. *legāre*, to bequeath]: gift or bequest contained in the will of a deceased person, consisting of chattel, goods, or money. Legacies are general, specific or demonstrative. A *general L.* bequeathes one or more of a class of things without specifying which particular one. If there is not enough to pay all the general legacies, then a *pro rata* abatement must be made in each; all must share the loss. A *specific L.* describes the property bequeathed so as to distinguish it from all the other property. Thus a horse, a ring, a hundred dollars, etc., are general; while the white horse Billy, the ring with initials N. N. inside, or a certain hundred dollar bond, etc., are specific. If the property specified fail, e.g., the horse dies or the ring is lost, the L. is adeemed, i.e., the loss is the legatee's, and he receives no compensation. On the other hand, a specific L. is not subject to abatement as the general is, but must be paid in full, regardless of other legatees. A *demonstrative L.* partakes of the nature of both the preceding; it bequeathes a specific value out of a general fund, as, 'a hundred dollars of my bank stock.' It cannot be adeemed, but if the fund specified fail, it must be paid out of the general assets. There are various technical modifications of these principles. Legacies are described also as *absolute*, when they

LEGACY.

vest unconditionally; *conditional*, or contingent, when made dependent on some event which may or may not take place; *model*, when directions are given as to the way in which they shall be applied to the use of the legatee; *residuary*, bequeathing all the personal property remaining after the rest has been disposed of as directed, etc. All legacies are payable only when enough property remains after all the testator's debts have been paid. Legacies can be administered only by a properly constituted executor, appointed either by the will of the testator, or, if this was not done, by the court. This executor becomes the representative of the deceased, all of whose personal property is vested in him, to be disposed of in the payment of the testator's debts, if any, and according to the provisions of his will. The law allows him a year from the testator's death in which to do this. Generally a L. left to an infant under 21 can be paid only to the legally constituted guardian; there are, however, exceptions to this rule. A bequest made to children, is held, unless otherwise specified, to refer to children at the time of the testator's death, including a child in the mother's womb, but not illegitimate children when there are legitimate ones. In general, as regards the construction of legacies, the rule is that the plain intent of the testator, as gathered from the whole will, shall be carried out. Thus, where a L. is left to a child on whom the testator, after the date of the will, had made a settlement, this settlement is regarded as an ademption of the L. Where the same special L., or legacies of equal value, are given twice to the same person by the same will, he is entitled to receive but one. But it has been held that where two legacies of unequal value are given to the same person by one will, or where legacies of equal or unequal value are given to the same person by different wills, he is entitled to receive both. Where a L. is left to a debtor equal to or more than the debt, the L. is presumed to be in satisfaction of that debt, unless there be evidence to the contrary: unless, however, it be clearly shown that such was the intention of the testator, a L. to a debtor does not constitute a release of the debt.

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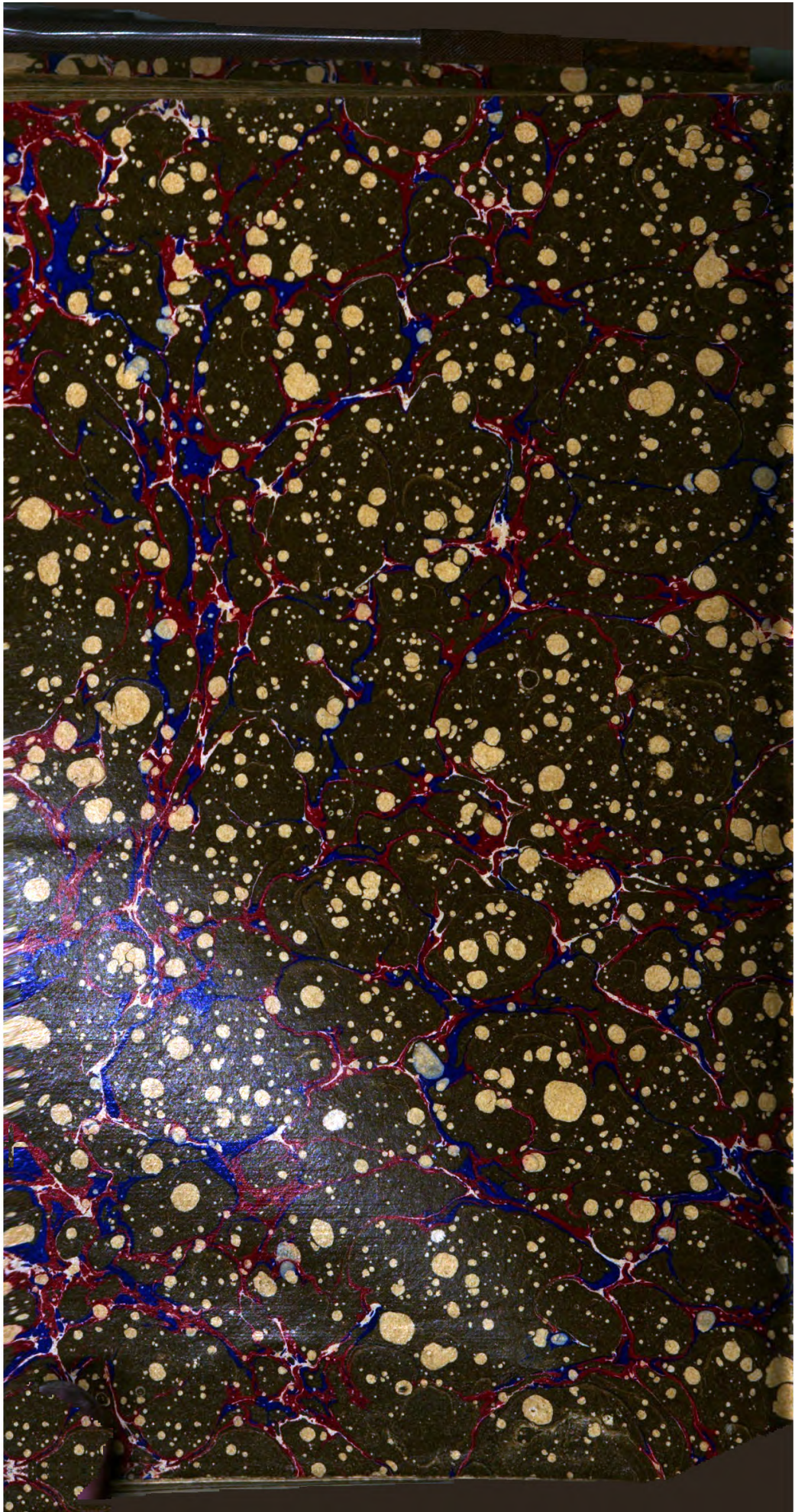
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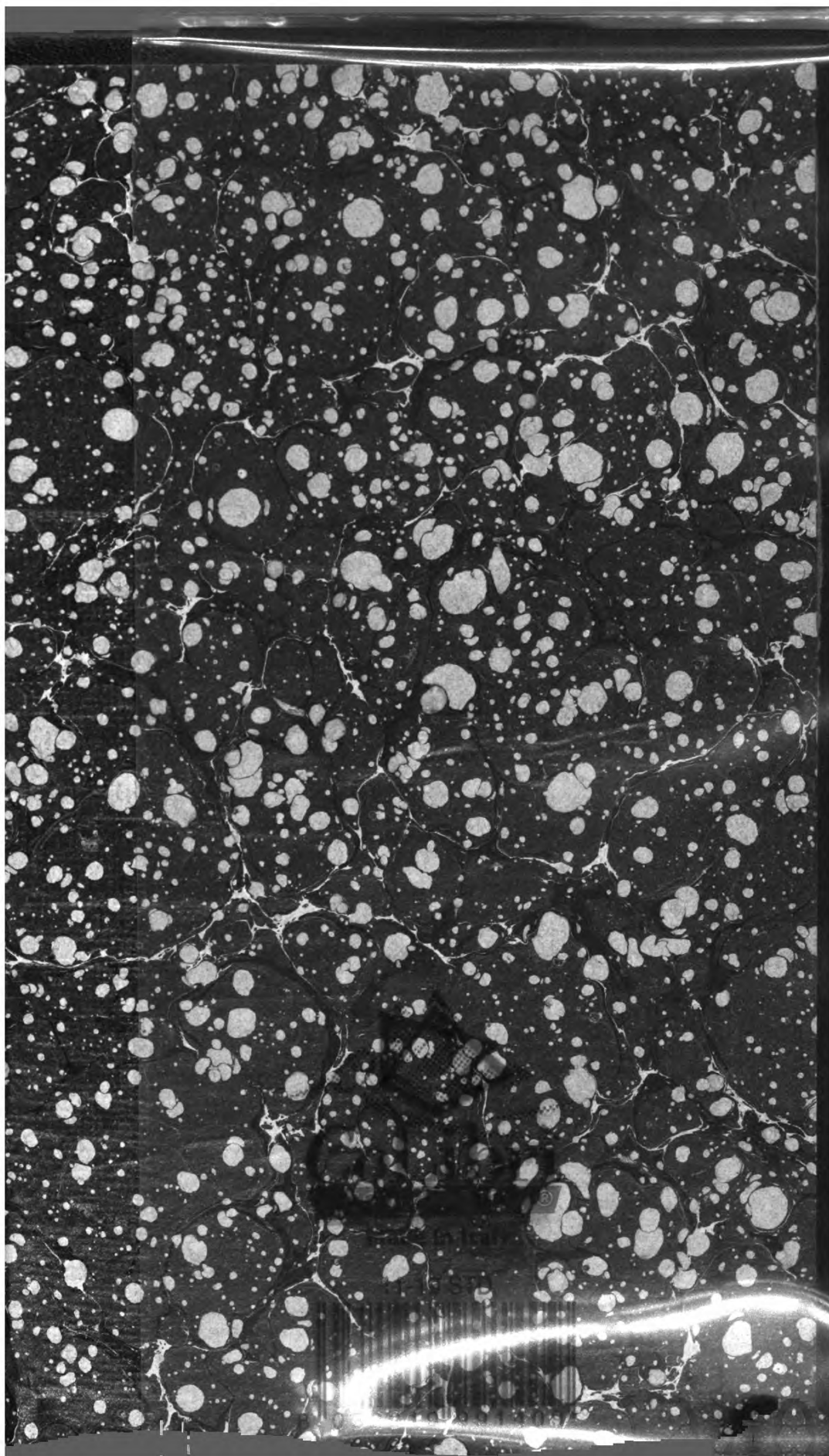
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